436 The ideal medium of exchange is the salt which [492] abounds in the Sahara and which is totally lacking in the Sudan. 439 Thus we see a caravan cycle spread out over a whole year and thousands of kilometers. This is all the more viable /sic/ for the Ihaggaren since it makes use of their many camels which otherwise might remain unused in part.

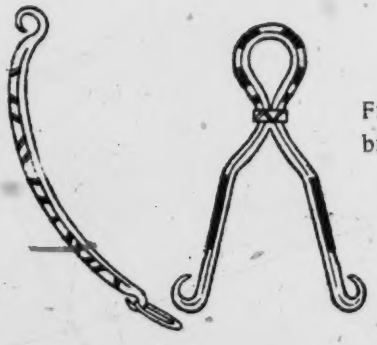

Fig. 22. Camel bit (detail).

317 The starting point is naturally the salt deposit. The mine /219/ is open; [415] one need only detach the salt in pieces and place it in leather bags to transport it. This labor is kept for the Iklan, who arrive at the salt deposits during the summer and [492] stay there from three weeks to a month. Each camel owner operates at will, and transports the salt to his camp after extracting it.

Fig. 23. Device for attaching the camel's bridle.

439 Toward mid-September, all the 484 caravaneers gather together by tribes. [487] Soon they leave their families in the Ahaggar and take the long route for the Sudan, crossing the Tanezrouft. Thus one may see caravans of 100 to 150 camels, but rarely more, for the pasture grounds would not allow it. The arrival in the Sudan must occur after the rainy

773 372 the tortures of hell. Iblis, however, communicated his secret to the blacksmiths, who since that time have known how to use it for metalworking.

372 [824] The Tuareg used to obtain fire by friction, using a board of torha (callotropis procera) and a branch of hardwood; they caught the spark on a tuft of silk from the fruit of the callotropis and blew on it until they got a flame, which required about a minute. They have kept this practice and still use it occasionally.

[439 177] Today they find matches sold by /228/ Tamanrasset merchants, but they all have tinderboxes with flint and a bent piece of iron.

[415 439] They do not keep up the fire. They carry it from one tent to the other in a fragment of an old gourd or sometimes hold a glowing ember in their hands without burning themselves.

Fig. 27. Ahaggar Tuareg dish, imported from Hausa country.

[237 484] When they want to transport it long distances, they use camel-dung embers.

[237] The Tuareg commonly use the excrement of camels and goats as fuel. In the high [137] mountains, wood is quite rare, but in the lower parts of the Koudia old acacia or éthel /atle? Ed./ stumps are to be found. They never [824] use the wood of the callotropis, which is the devil's tree and makes muffled noises when it is burned.

[823] Basalt blocks are never used to make the hearth, since they believe that basalt is possessed by genii and will explode violently when heated.

352 Furniture. -- We have briefly described the objects furnishing the parts of the tent reserved for the husband and wife. To these must be added a certain number of objects which make up the

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furniture. These objects are not numerous and reflect the primitive life led by the Tuareg.

On the left side of the tent is generally found the goatskin water bag, hung on two wooden stakes placed in a V-shape. An old piece of cloth often covers it to protect it from the sun. The waterskin is often empty, for the Tuareg are not very farsighted. When there is water, they drink; when /229/ they are out of it, they stay there waiting a half day until the Iklan get back from the well.

Fig. 28.
Tent shovel.

When a traveler passes by, he is most generally assailed with demands for water, while he himself often hoped to find some in the camp.

In front of the door and close to all the tents is an enormous wooden mortar and its pestle, in which the servant girl crushes millet and dates. By searching a bit in the tent or in the shelter used as a kitchen, one may find two or three hemispheric wooden dishes destined to hold food and two or three conical bowls serving as drinking vessels. Hanging on one of the outer stakes of the tent are a wooden milking vessel, an esparto winnowing basket for sifting millet flour, serving at the same time as a dish cover, one or two little esparto mats which can serve the same purpose, and finally a few wooden spoons. Each mistress of a tent has a little

412 Each mistress of a tent has a little
356 wooden scraper to clean the floor of the tent, which is generally
342 covered with a layer of fine sand taken from the bed of the nearby wadi.

415 Let us add one or two earthen pots, little teapots and tea glasses, and we have an idea of Tuareg furniture, which, as one may realize, is reduced to the simplest terms.

484 When a camp is moved, all these objects are loaded on asses,
492 provided for the occasion with little pack saddles. The women are
[462] left with folding the baggage, loading it, and transporting it on the
[565] asses. They themselves ride on the baggage during the moving; only noblewomen travel on camel back. Camels are used in moving only if it is a long trip.

Chapter 3

Food

243 People may have said that the Tuareg, like many herding
[2]42 peoples, lived on the milk from their herds. More precisely, they live on the products of their animals, but milk and meat alone would not be enough. Indeed, the base of their diet is a graminacea, bechena (Sorghum cernuum Host.), a kind of millet cultivated in the Saharian oases and in the Sudan.

[452 The Tuareg eat some wheat, but very rarely. Especially during
484] their moves and in the caravans, they eat wheat cakes cooked in the sand, for they are easily and quickly made.

[101] It is rather curious to note that the Tuareg, who belong culturally to the Mediterranean civilization (which may be called the wheat civilization), have not kept wheat as the basic food as other North African peoples have. And yet the question of food is one of the things which most ties man to his native milieu and which

According to what we know of the production of the cultivated lands of the Ahaggar itself and according to what the Tuareg are obliged to import, we may know approximately their needs. During the good years, local production is equivalent to only one quarter of the needs. It may be evaluated at 150 tons. To this must be added wheat production, but this cannot be taken in consideration insofar as consumption is concerned, since it is almost entirely destined for export. It follows from this that import needs amount to 4,000 loads of millet a year, calculated at 150 kilograms each, making 600 tons, which are for the most part bought or exchanged at Damergou or in the Tahoua region. The annual demand for dates is 400 loads.

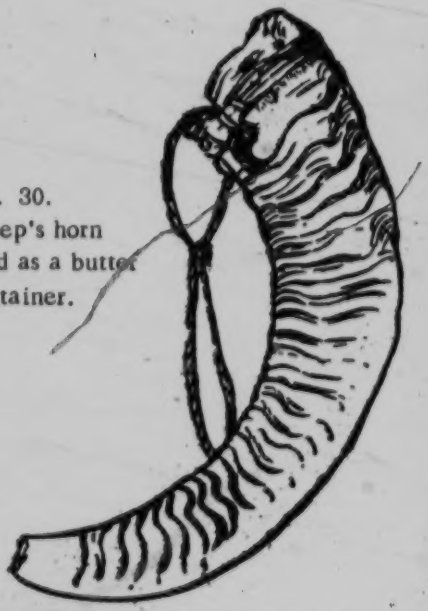

Fig. 30. Sheep's horn used as a butter container.

From these figures it follows that the annual needs per person are approximately one load of millet and one-tenth of a load of dates.

Individual consumption may thus be estimated at 187 kilograms of millet and 15 kilograms of dates per year, while an identical calculation /232/ for the Saharian Arabs has given us 180 kilograms of wheat and 75 kilograms of dates. But we must not deceive ourselves. These figures are drawn up for years, if not of abundance, at least of relative facility. Indeed, the annual average is very much lower, for the Ihaggaren do not always have at their disposal the means of exchange to meet their needs, and one may reduce the figures cited above by a good third, sometimes even by half.

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To make up this deficiency in graminaceae, the Tuareg have recourse to products of gathering.

[262]

After a rain the captives and the Imrad women gather the seeds of certain plants which grow in the Ahaggar valleys. They are the afasso (Panicum turgidum F.) and the oulloul (Aristida pungens D.). But the size of the yield varies with the abundance of rain, and one may say that most of the time it is quite /233/ uncertain. This is not the case in the Sudan, where the Iklan gather whole bags of wild seeds, particularly cram-cram (Cenchrus echinatus), every year.

[237 28 415 234]

Fig. 31. Little leather flask used as a butter container.

To be sure, there are a few wild berries in the Ahaggar, such as those from the jujube tree (Zizyphus lotus D.) and the téborak (Balanites aegyptiaca). In case of famine the Tuareg fall back on other seeds, such as those of the colocynth, the Acacia tortillis, etc. However, all these plants play only a secondary role in the Tuareg diet.

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The Tuareg have at their disposal milk from their camels, goats, and ewes. They drink it either whole or diluted with water, either fresh or sour.

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The luxury of drinking whole milk is reserved for young mothers and children. Adults generally drink fresh milk morning and

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[264]

272 evening after the milking, and at the noon meal they drink milk which has already soured. It may accompany the dishes /234/ of [262] béchena, serve as a sauce, and also be taken as a drink. When they make long moves, the Tuareg carry a bag full of skim milk on their camels. This turns rapidly and gives a sour-tasting whey which is very refreshing. But milk is particularly appreciated for its by-products, butter and cheese.

234 Butter -- oudi -- is obtained by churning milk in a [415 237] little leather bag; a woman shakes it on her knees, making it swing from right to left and from left to right. [237 415] The butter collected is placed inside a sheep's horn which serves as a receptacle. When butter production exceeds daily consumption, the butter is placed in leather containers, in the shape of a flask, where the heat usually keeps it liquid or very fluid, except in winter when it is necessary to heat it to get it out of the container.

Fig. 32. Butter container made from the skin of a camel's neck.

262 Butter is mainly eaten as a sauce; béchena gruel or wheat cakes are moistened with it. The Tuareg never cook it, as in fried foods.

234 In years when pasturage is particularly good, which assures an abundance of milk from the animals, the Tuareg make cheese -- tikomaren. They sour the milk, squeeze the curds in little mats

264 [415] The Tuareg use spoons. The use of this implement is peculiar to them, for their Arab or Negro neighbors eat with their hands. The custom must be related to the wearing of the veil, which they do not take off to eat and which prevents them from putting their [182 291] hands full of food to their mouths. They carry food to their mouths while slightly holding up the ends of their veils.

[271 272] For beverages they drink only water, whether it is clean or polluted, and milk.

For half a century they have had the habit of drinking green tea in the Arab manner; they aromatize it with mint or some perfumed plants of the Ahaggar, /238/ chih (Artemisia herba alba) in particular. Coffee, which was formerly much used by them, is now [757 178] taken mainly as a medication to calm violent coughs or stomach aches.

276 If we now seek consumer goods taken as stimulants or narcotics, we see that the Tuareg know only tobacco, which they chew or take as snuff.

Smoking is not one of their customs. The young men who are [177] in contact with the French like to beg a cigarette, but it is simply in the spirit of imitation.

Duveyrier, however, has said that the Tuareg smoke. Was this, 114 perhaps, the fashion among the Tuareg who visited Ghat? Before 276 him Barth wrote that all riverain people living along the Niger loved to smoke. "It is very seldom that they leave their pretty little clay pipes, and all the Rouma, like the Tuareg, cover their mouths when smoking, so that all one sees is a pipe bowl coming out of the shawl which covers the face." (1)

1. Voyage en Afrique, vol. IV, p. 137.

layers /271/ dating from that epoch. Its origin must be sought there, and it is now nothing more than a Neolithic vestige.

A number of little cases which the Tuareg wear suspended around the neck and resting on the chest may be considered ornaments. They are little leather cases -- decorated, painted or embroidered, or even stamped in relief -- and they contain various little instruments. Thus, there are mirror cases, needle cases, razor cases, scissor cases, toothbrush cases, etc., and little wallets in which the Tuareg put what they prize most -- money, a /strike-a-light/ steel box and its flint, or tobacco.

/272/ They also wear quantities of amulets in leather or metal cases on their chests, their arms, or their hair. But this custom, religious in origin, has evolved in the direction of ornamentation, for many of these amulet cases contain nothing.

Female jewelry is much richer and more varied. It is all made of silver; gold jewelry is never seen among the Tuareg. They maintain that gold is unlucky for the possessor and that this metal corrupts people.

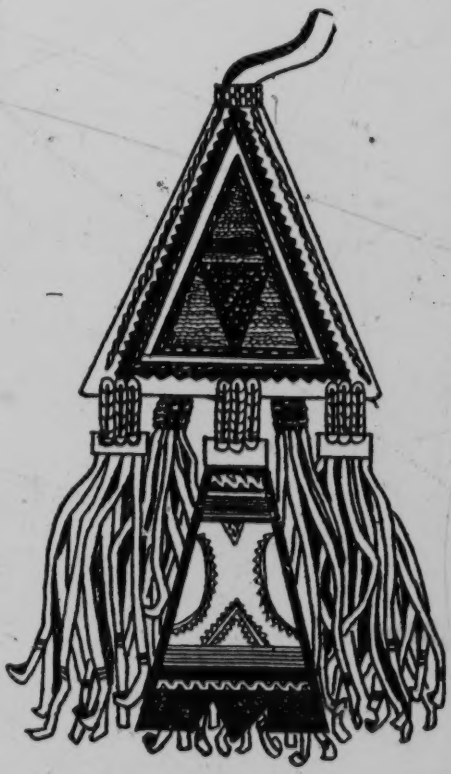

Fig. 42. Needle case of worked leather, with knife slits and embroidery. The background is red; the ornamental painting, black; the embroidery, red and green cotton.

People adorn themselves with their jewels only during festivals; they are ordinarily kept in bags closed by a curious rectangular padlock, which is provided with one or two interior bolts; it must be undone with an enormous key which the Tuareg always have on their person.

Fig. 45. Ahaggar Tuareg women's ear hoop.

Arts and Crafts Among the Ahaggar Tuareg

The nomadic and pastoral life which the Tuareg lead obviously limits the development of craft techniques and that of art itself. For them, all is reduced to the immediate necessities of everyday life -- articles for the household and the house itself, harnesses, clothing, and, accessorily, adornment.

If we look for the raw materials used and at the disposal of the Tuareg for making the different objects which they need, we observe that wood comes first, then leather, then certain graminaceae stems, and finally metals.

If, secondly, we look for the aptitudes which the Tuareg have for working these different raw materials, we notice that their enumeration follows the same order as above, with the reservation that none of them know how to work metals. The latter occupations are the prerogative of the Enaden, that is to say, the artisans, and it is evident from this that without the artisans' help Tuareg industry would be limited to work in wood, leather, and esparto. In short, it is the cultural cycle of the pastoral peoples of the steppe.

It is only much later, when the Tuareg had integrated the Enaden with their social organization, that they used metals. Therefore, we perceive the considerable role which artisans must have played in technical evolution and that of art itself.

Fig. 46. Wooden funnel.

/277/ The presence of Enaden in the camps has reduced the manual labor of the Tuareg, but the latter are still able to make wooden articles -- milking vessels, bowls, tent stakes, etc.

One of their most curious customs is that women from the high nobility work wooden vessels and funnels with their hands by means of a little adze. They usually give them to the wives of their Imrad, who are very appreciative of these gifts. In the Ahaggar camps we found many little utensils which were the work of famous noble-women, of taménokalin whose names are piously kept; these objects were saved with much veneration. This custom is even more remarkable since we know the scorn that the Tuareg have for manual labor; we must see in it a relic of woodworking which must formerly have been everyone's work, without distinction, before the creation of the artisan class.

Wood furnishes containers for food, drinking vessels, milking vessels, mortars, pestles, tent stakes, crosspieces and boards for making saddles. The Ahaggar does not have more than five or six species of woods which can be worked, and the articles, very simply shaped, are much less varied than in the Sudanese tribes.

All Ahaggar women, noble or vassal, know how to tan, remove hair from, sew, decorate, and embroider leather. They are able to make a waterskin needed to carry water, prepare skins to make tents, and manufacture bags for transporting food and personal objects. They have all become so expert in these labors that it is

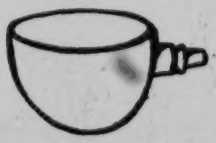

Fig. 47. Amoula, a little wooden "bottle" for young children to drink from.

difficult to find any other peoples in the world who possess such a developed leather craft.

The scarcity of vegetable materials in the Ahaggar is one of the reasons why the use of esparto is relatively restricted. Only the stems of a graminacea common in the wadies (Panicum turgidum) are used to make mats -- large enclosing mats which surround the tent, sleeping mats, mats for covering plates.

/278/ The stems are bound by little leather thongs, and the combination of graminacea and leather is extremely effective; it allows very regular geometric decorations at the same time as a very solid work.

There are no esparto vans among the Tuareg. The women use palm-leaf vans and hats, but these articles are the work of the Harratin from the little palm groves of Silet, Ideles, and Abalessa.

283 Spinning is done by all Tuareg women. They spin the hair of the
462 goat, the camel, and the wild sheep, making very solid cords and saddle girths.

286 Weaving is limited to the making of goat's-hair, or more rarely camel's-hair, bags. This is a very primitive technique which does not require any loom and which is, furthermore, in the process of disappearing from the Ahaggar, where only a few noblewomen still practice it. It is completely extinct in Sudanese tribes.

324 Stonework, a relic of Neolithism, was still carried on in the Ahaggar
438 a few years ago to make arm rings. Layers of granitoid schists were formerly worked
[415 at Aseksem and Terahart in
322] the Tafedest. We also found an ancient workshop south of Silet on the banks of the Tamanrasset wadi. Today all stone bracelets come from Air and a few from Hombori, where they are manufactured by Tuareg or Hausa artisans.

Fig. 48. Tabarekkat wooden ladle, also serving as a drinking vessel.

326 Metalworking is exclusively in the hands of the Enaden, who transform
[564 silver, copper, and iron. These materials, with the exception of iron,
[135 do not exist in a native, workable state in the Ahaggar. But although iron ore is common /279/ in some volcanic rocks of their country, the Tuareg do not have it exploited, for it is found in such small particles that it necessitates a disproportionate amount of forge work for the quantity likely to be recovered. Nevertheless, the memory of casting ore still remains among the Enaden. They use several forges at once, but do not know
[439] the blast furnace. The caravaneers coming from the north or from the Sudan used to bring metals.

117 At the present time silver comes from coins which are melted. For
326 years the Tuareg have had Maria Theresa dollars at their disposal; these

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Pottery is made by Negresses, the wives /281/ of Harratin, or freed former captives who live in the agricultural centers.

This outline of the techniques and industries of the Kel Ahaggar Tuareg brings out their poverty.

Can we speak of art among the Ihåggaren? That seems difficult, for aside from a few rare objects, all those that they use are more or less in use in the Ahaggar are imported from Aïr or Âdrar des Ifôras, and that is explained all the better by the fact that the artisans are more or less originally from these regions.

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[415]

Fig. 52. Sugar tongs.

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It is difficult to determine the origins of Tuareg art in general. It is in reality a composite art taken from all their neighbors, which, is not, for the most part, the achievement of the Tuareg themselves but of their artisans. It is among the latter that the distant origins /of Tuareg art/ must be sought.

The tastes of the Tuareg appear to be unchangeable. They have been fixed for centuries; therefore, in ancient documents some hundred years old one finds the same shape, the same dimensions, the same coloring as today. In this regard we shall say that the Enad is not an artist. He is a worker who may have taste, but who is, on the whole, incapable of creating. He faithfully reproduces the model which has been handed down to him. He

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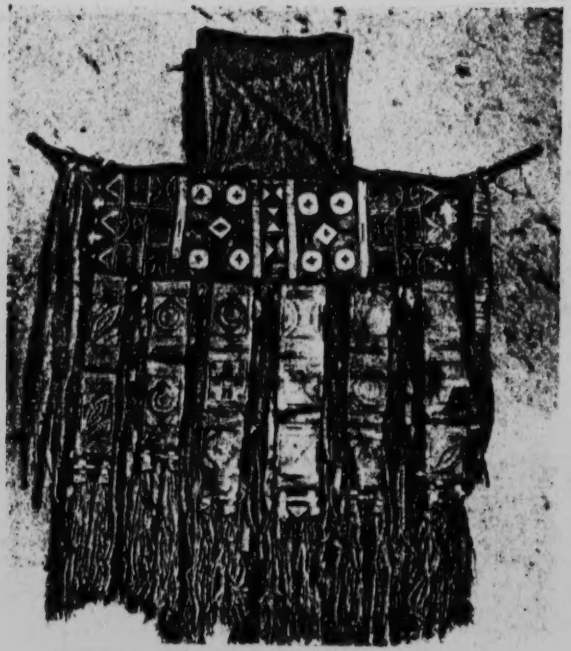
Old noblewoman from the Kel Rela tribe weaving a bag with goat's hair thread.



Goatskin bag used by women to transport their personal clothing. The very delicate decoration is obtained by cutting out the skin and applying embroidered leather.

1: Lhote--166a E-5 (1929-1940) 1944 MS25 Tuareg MS25

1: Lhote--166b E-5 (1929-1940) 1944 MS25 Tuareg MS25

Plate XVI

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Settled in improvised camps, blacksmiths work in the open air making weapons and utensils needed by the Tuareg.

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The Imrad women are in charge of taking the flocks to pasture and water. Every two or three days they go to the wells, drawing water for the goats, who drink out of wooden bowls or out of skins used as containers by placing them on mounds of sand in the shape of a basin. They fill the waterskins which will be transported to the camp by asses.

492 adopted by all the Tuareg of the Adrar des Iforas, which the
171 Chaamba Arabs also use, and which is derived from the saddle of the Moors of the western Sahara.

492 Ahaggar noblewomen, who travel only on meharis, have
[565] special saddles resembling the basour of the Arabs but without the arch covered in cloth. These saddles are called akhaoui; they
[322] are made /319/ of wood and ornamented with large pommels in front and small plaques trimmed with copper nailheads on the side.
[531] For long moves these saddles can be provided with a wicker cage covered with cloth, but this is not a common practice.

Saddles hold leather bags which contain either a change of
[415] clothes or food reserves as well as the waterskins constituting the necessary provision for crossing regions without wells.

For transport, camels are provided with a special packsaddle made of palm fibers which literally crowns their backbone. Most of these packsaddles are made in the Tidikelt. For caravans which last a long time the animals are loaded with about 100 kilograms, plus the waterskins that are generally added to the baggage. The servants, who accompany the animals and do not have personal mounts at their disposal, /320/ ride on top as excess weight and make the whole trip under these conditions.

[481] The Tuareg are very poor walkers and cannot conceive of a person's going on foot, even to spare the mount for a few kilometers.

Asses, which as we have said are used for transport within the massif, are provided with a little packsaddle serving as a saddle at the same time. When camp is moved, they are loaded with the
[312] tent, tent stakes, and bags containing food reserves. They also assure the carrying of water from the well to camp.

484 When an Amrid travels alone on a voyage, he takes an ass to
492 carry his water, his small baggage, and his blanket. Pushing the
[481] ass before him, he walks behind carrying his lance over his shoulders. He mounts on it only during the hot hours of the day.

351 and are extended out in front to form a sheltered enclosure which is usually semicircular with the entrance opening in the middle. The little forecourt and the ground inside the tent as well are covered with clean sand or very fine gravel from the bed of a nearby stream. Tuareg camps are always very tidy and astonishingly clean.

562 Both in the forecourt and in the tent itself
342 the men's place is on the right as you enter and the women's and children's on the left, which is the reverse of the arrangement customary among Arabs. It has often been said that the men's place is on the East, but this is simply because tents are almost always pitched facing south.

352 Household furniture and effects include
[439] sheepskins, or rugs obtained from the North by trade, leather bags of food and personal belongings, saddles, bridles and weapons,
[415] wooden bowls, funnels and spoons and maybe an earthenware cooking pot or two, a wooden
[412] mortar and pestle or perhaps two sets of different sizes, and a stone quern which may be either of the Neolithic saddle type or the small rotary model of the Roman Legions. Arms and food are stored in the men's half of the tent and equipment connected with food preparation in the women's half. A guerba full of water is hung from two long stakes just outside the forecourt. A brush
[343] windbreak built nearby shelters the outdoor kitchen, and another windbreak, some 50 to 100 yards away, shelters the family slaves.

Sometimes in the hottest months, and particularly when a camp remains stationary for a considerable length of time as it does in periods so dry that it is dangerous to move far from a permanent water supply, the tents may be stowed away and zeribas set up in their place. We recall that these are cubical or cylindrical structures made of reeds, long grass or palm fronds laid over a wooden framework measuring roughly 10 to 15 feet across and 8 to 10 feet high (fig. 37, *a*). The Amenokal's camp was installed in zeribas when the writer visited it in November, 1955, near the end of an unusually long period of drought.

361 Camps are always pitched in an inconspicuous spot and always on high ground except on very rare occasions when the sky is cloud-

2: Briggs E-4, 5 (ca. 1956) 1958 MS25 Tuareg MS25
[P. 251] Hoggar
[Pp. 243-250 not processed]

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Fig. 36. *a*, A typical camp site and tent of the Ahaggar Tuareg. *b*, A chief of the Ahaggar Tuareg sits before his tent, camel whip in hand and surrounded by his family. (Photographs by Chasseloup-Laubat, courtesy of the *Musée de l'Homme*.)

tanned and sewed together. The assemblage of these hides [281] constitutes the cover, the essential part of the tent, and is 342 called "ehakit" ⵄⵀⴰⴽⵉⵜ .

The tent is supported by a central master beam called "tamankaït" ⵜⴰⵎⴰⵏⴽⴰⵢⵜ .

A pole, "idjem" ⵉⴷⵊⴻⵎ , is placed at the entrance of the tent and is flanked right and left by poles called "madar'en" ⵎⴰⴷⴰⵔⵄⴻⵏ . /26/

Other poles are used to hold up the edges: these are the "tissedass" ⵜⵉⵙⵙⴻⴷⴰⵙⵙ . The little pegs that hold the tent to the ground are called "tisselitaï" ⵜⵉⵙⵙⴻⵍⵉⵜⴰⵢ . Sometimes bows are also used, called "adjedjou" ⴰⴷⵊⴻⴷⵊⵓ , plural "idjedjan" ⵉⴷⵊⴻⴷⵊⴰⵏ .

The tent is surrounded by mats of "afezzou" ⴰⴼⴻⵣⵣⵓ [285 (Panicum turgidum, Graminaceae), called "asabar" ⴰⵙⴰⴱⴰⵔ 824] plural "isebran" ⵉⵙⴻⴱⵔⴰⵏ , which are pulled back in the day and drawn close at night, to close the tent.

In the tent one finds first that which concerns water, that 352 is, waterskins, "abeïor'" ⴰⴱⴻⵉⵄⵓⵔ , plural "ibiyar'" 415 ⵉⴱⵉⵢⴰⵔ , hung on forked sticks, "tidjettaouin" ⵜⵉⴷⵊⴻⵜⵜⴰⵓⵉⵏ . They are filled by means of a funnel, "asegueffi" ⴰⵙⴻⴳⵓⴻⴼⴼⵉ , plural "iseguefa" ⵉⵙⴻⴳⵓⴻⴼⴼⴰ . To water the camels, the 231 Tuareg use troughs of hide supported by hoops at the top and called "tafaraout" ⵜⴰⴼⴰⵔⴰⵓⵜ , plural "tiferouin" ⵜⵉⴼⴻⵔⵓⵉⵏ . They also use these troughs for the harvest of "toulloult" grain 243 (Arthraterum pungens, Graminaceae) or of "afezzou" (Panicum turgidum, Graminaceae).

For milk and butter, they have a waterskin for milk, 415 "tanouart" ⵜⴰⵏⵓⴰⵔⵜ , plural "tinouarin" ⵜⵉⵏⵓⴰⵔⵉⵏ , and a kind of porous water jug made of a hollowed gourd and called "az'enou" ⴰⵣⵄⴻⵏⵓ . To ladle the milk, serve it or pour it, they use a wooden vessel with one handle called "asoukal" ⴰⵙⵓⴽⴰⵍ . To store and transport melted butter, "oudi," they have waterskins of various shapes, the most common being the one called "tahattint" ⵜⴰⵀⴰⵜⵜⵉⵏⵜ , but they also sometimes [281] use the tanned hide of a camel's thigh. /27/

To feed young camels and lambs, they use a kind of 231
nursing bottle of wood shaped like a cup equipped with a tube. 415
This utensil is called "ar'alala" .

For dishes, one finds in the tent wooden bowls of all sizes, 415
called "akous" , plural "ikassen" ,
large wooden dishes, "tar'elalt" , and smaller dishes
used as plates and called "tar'ehout" , plural
"tireha" . To ladle milk or gruel, the Tuareg use
a large ladle, "temoulat" , plural "timoulatin"

[361]

Dautheville

Tuareg Camp at Tazerouk

, and for eating they have ordinary wooden spoons
called "tesoukalt" , plural "tsoukaline" .

To separate the grains of "toulloult" and "afezzou" from 252
their hulls, they use small trays of afezzou called "tissiit" 415
, plural "tissiin" .

They also use a great deal the wooden mortar, "akabar" 415
, with its pestle, "ihar'en" .

Finally, they have hide sacks to hold dates or grains, which 281
they call "adjera" , plural "idjerouen" 415

All the above utensils are made of the wood of the 415
"teborak" (Balanites aegyptiaca, Simaroubaceae) and of the 824
abser', or "tamat," (Acacia arabica).

5: Nicolaisen E-4, 5 (1951-1955) 1959
MS25 Tuareg MS25
Ahaggar
Air

culture is never practised without irrigation. Rodd thinks that the Air agriculturists gave up shifting cultivation because they are too poor to-day to risk losing their seed in the event of inadequate or irregular rainfall (Rodd 1926a, p. 133). I rather think the reasons are that the agriculturists of the massif nowadays grow very little millet and have a better irrigation system than in the past. In summer maize forms by far the most important crop, and it needs irrigation which is comparatively easy when using zebus for drawing water. However this may be we can assume that a type of agriculture related to Sudanese shifting cultivation was formerly important to the Air agriculturists, and although irrigation is nowadays used everywhere agriculture in certain places of Air is still a kind of shifting cultivation. Many agriculturists do not resort to manuring nor do they carry fresh soil to the gardens as in Ahaggar. With crop rotation they utilize one and the same plot for a few years but then have to cut trees and brush-wood somewhere else to make a new garden. A new well must then also be dug, but as irrigation wells are rather shallow this work is comparatively easy.

There are in Air certain agricultural implements related to those of Sudanese farming cultures. We must mention in particular a small hoe hafted by means of a thong *(tagoumit)*. It is unknown both in Ahaggar and Tassili-n-Ajjer as well as further north in the desert while extremely common among Sudanese shifting cultivators. Feilberg has classed it with the so-called Old Sudanese Culture established by Baumann (Feilberg 1934, p. 260ff. – Baumann 1940, p. 50ff.; 1944, p. 213ff.). Baumann claims that this culture did not know the sickle, considered by him an implement of the so-called Young Sudanese Culture (Baumann 1940, p. 56ff.; 1944, p. 283ff.). The sickle (Air: *elegesouar*, Ahaggar: *amreh*) is in fact unknown in many Air villages, and is according to my investigations not generally used for the harvesting of crops but for cutting annual grasses to be stored for fodder. In Air the harvesting methods are as follows:– millet is cut with a knife, maize is cut at the root by means of the above-mentioned hoe, while wheat and barley are pulled up with the hands. Similar harvesting methods seem to be known in the Sudan (Baumann 1944, p. 295ff.). As a Sudanese trait we can perhaps also recognize the large clay amphorae used for the storage of cereals (Rodd 1926, p. 317. – Nicolas 1950a, p. 146).

We can conclude this section as follows:– While the negroes of Ahaggar apparently have arrived in that country later than the fair-skinned Berbers the oldest known population in Air were Hausa-speaking negroes subsisting predominantly as agriculturists. Their original culture apparently was closely related to that of Sudanese shifting cultivators. Contacts with the north and in particular invasions of fair-skinned Tuareg have changed their cultural position. Mixing with the Tuareg they have also changed their physical type, but they are still predominantly negroid. They have adopted a Tuareg dialect but have retained part of their old vocabulary.

261 /93 cont./ To sum up the migrations of the Kel Ahaggar,
166 let us say that they extend in a radius of about 100 kilometers,
221 within the tribal lands, but that the men may lead the herds, according to the times, toward pastures 1,000 kilometers from the family camp, and that an annual series of caravans sees them cover 15° of latitude.

The harratin cultivators are only sedentary on occasion; each year there is a large human movement from one agricultural center to another. There are three reasons for this: the Tuareg, owners of the soil, are no longer able to furnish the hartani with enough seed or to fulfill the agricultural contract; water bwgins to be lacking in a center, or digging foggaras becomes impossible; lastly, the exhausted land needs rest. It is thus that, from one year to the next, an important, well-cultivated center may become /94/ insignificant and even deserted. It appears to be impossible to establish a cycle for these agricultural migrations.

Tuareg Furnishings

352 Lightness and flexibility are the two essential qualities of
492 Tuareg furnishings. All of these objects must be transported on the backs of animals; weight, therefore, is the principal enemy; moreover, it is easier for the animals to carry loads capable of molding themselves against the animals' bodies.
● 415 Thus we find a whole assortment of sacks, chiefly leather ones, in the Tuareg equipment.

These sacks are tanned in such a way as to keep the leather very flexible; but the process employed is suitable only for extremely dry climates: transported to France, the Tuareg leathers seem to come alive again, they swell with humidity, then give off a disagreeable odor, and finally become unusable.

415 All of these sacks are decorated. Some are colored and
531 bear designs put on with dye or are decorated with tinted

415 /94 cont./ leather, and sometimes they are even embellished
531 with motifs on cloth, accentuated with needlework in silk; others are made of natural leather, adorned with frayed leather thongs, for the main principle of decoration for everything carried on a camel's back seems to be to lengthen the lines in order to make them harmonize with the silhouette of this amazing animal. The decorative motifs are many but always linear; the circle, as well as the arc, is used, but the straight line dominates; there are no arabesques, no complicated curves; triangles, squares, rectangles, even trapeziums and diamond shapes are used. Red is the chief color for leather, but a wide range of other colors, artistically used, makes possible some pleasing effects; delicate greens characterize the work coming from the Sudan, pure whites are set in blacks, dark greens, and browns, different tones of yellow cover large surfaces. Then, slight grooves in the dyed leather produce interesting effects.

[492] /95/ The sacks are secured on the animals by numerous cords. These are plaited with goat's hair. Making all these fittings takes unimaginable time and patience. Such a task cannot be thought of except in relation to a nomadic tribe.

An interesting study could be made on Tuareg decoration, comparing it to that of certain Indian tribes of America; one thinks in this connection of the hypotheses advanced by Commandant Cauvet in Les Berbères en Amérique /Berbers In America/.

352 Here is a list of the various objects to be found in a Tuareg tent, undoubtedly an incomplete list, for the most familiar objects are the easiest to forget.

The woman, mistress of the hearth, owns her personal effects. The wardrobe bag, a large rectangle 80 by 60 centimeters at the top of which is an opening 30 centimeters high by 50 centimeters wide, is called "agherredj"; clothes are kept in it. Some of these agherredj are magnificent works of art.

352 /95 cont./ The other sacks belonging to the women all have the same shape. The "guerfa" is smaller than the agherredj; the "tarerrat" plaited in goat's hair is not seen as often.

The "adhaboun" consist of a whole series of small sacks of the most varied forms with a solid frame of plaited palm or sometimes of wood; small objects are put away in them: jewels, perfumes, remedies, etc. All of these sacks are 422 414 generally closed with the famous Tuareg padlock, only a token lock, but always respected.

492 Rich women possess a special saddle called "akhaoui" or "takhaouit" according to its size, kept in a corner of the tent. It is an extremely curious assemblage of three types of wood (tehounek, rose laurel, tabrakat), each piece of which is chosen according to its use, shaped, cut, and decorated. The different pieces of the takhaouit are bound together with leather; it takes years to bring together branches that can be used, this work being almost always done by the women. The "haïf" is a strap /96/ that secures the saddle to the back of the camel; plaited in goat's hair, it measures five centimeters wide and three meters long; one end is adorned with an enormous pompon 50 centimeters wide and sometimes weighing more than three kilograms; embroidery in red and green wool gives a sumptuous air to the pendant, which reaches nearly to the ground when the haïf secures the saddle.

A richly decorated takhaouit has other pompons symmetrical to the haïf; these are the "tidarsiouin."

352 The feminine rug par excellence, which covers the tarraouit during a trip, comes from Timmimoun and is called "tagamdafest"; it has large black, red, and green bands, and, in the middle of it, tufts of yellow, black, and green wool.

Let us add to the objects belonging to the woman the ● 415 "sendouq," a kind of small box in which sugar and tea are kept; the name, of Arabic origin, seems to indicate that it is of relatively recent importation. The "tesenit" is a palm-fiber basket in which kitchen utensils are kept.

492 /97 cont./ For he who wants a particularly well-equipped animal, there is the "cascabou," a sort of copper fitting with pendants and little bells which is fixed on the camel's nose, giving the beast a proud appearance and classifying the owner.

The things owned in common consist of, first, the "abaïor" used as water containers; these guerbas are made of goatskin or sheepskin. The "tamhit" ("mezoued" in Arabic) are used to carry grain. Butter is made in the "edjiouer."

●415 We already know the use of the tendi /mortar/ and the pestle (iharen). Fixed or turning millstones called "tahount" are used near the agricultural centers.

The "terahout" is the hemispheric dish; there are several sizes. The "tesoukalin" are the small spoons; the large ones, often pyrograved, are called "temoulalt." The metal or baked-earth pot is called the "terrirt." Everything used for making tea has an Arabic name: the kettle (ralleye), the teapot (bered), the glasses (el kissan), and the tray (el tabla). The trivet is called "isseguida."

/98/ Clothing

291 The grand bearing of the Tuareg, which so impresses the visitor arriving in the Ahaggar for the first time, is largely due to the clothes he wears. The silhouette of the "men of the veil" becomes familiar. The fullness of the clothes and the lightness of the cloth, which favors harmonious drapings, seem to exaggerate the size of both the men and the women. European traders who give free rein to their imaginations are numerous; they speak of blue phantoms and indulge in comparisons as unreal as they are evocative. Here we must strip the Tuareg of this poetic aureole. Let us begin by the trousers, called "iqarbi" ("sarroil" in Arabic). Very full and not creased, the iqarbi has a hem at the waist which permits use of a plaited leather belt called "tamenalt"; there is no pocket. To make it, cloth 1.50 meters long by 1.40 meters wide is used. It is often made of black sateen or chegga.

252 /105 cont./ several stalks of a plant called "a'lnessis," is cooked for a very long time. When it is ready, it is poured into the "tahatiat" or the "arra'lan" for keeping. The tahatiat is a kind of guerba /waterskin/ made with skin from a camel's neck and still has the original curved shape. The arra'lan is [415] shaped like a demijohn; it consists of a piece of camelskin molded in a hole dug in the ground, filled with camel dung and gravel, tied securely at the mouth by a cord, and thus dried and hardened.

"Tikamarin" is a cheese made from whole milk in the following way: a young goat is killed and its stomach, still full of milk, is carefully kept; the milk is allowed to harden in the stomach pouch, then is carefully preserved. A piece of this "seed" cheese, about the size of a gaming die, is plunged into a tarahout containing five to eight liters of milk. After a day the milk has completely curdled. A lump of this cheese, still damp, is crushed in the hands, previously washed, and made into slabs about 15 by 5 centimeters. These slabs are arranged for drying on a bed of afazzou stalks. Tikamarin is eaten dry; it is kept over a year, and it is said to be still edible after four years.

/106/ "Ioulsan" ("qlila" in Arabic) is a cheese made from the sour milk left over from kaing butter. This sour milk is poured into a pot and is heated for a long time. The contents of the pot are then poured in a special filter, a kind of afazzou basket; the water drains off and the remaining cheese is then fashioned into small circular cakes, six centimeters in diameter and two centimeters thick. Ioulsan is quickly eaten, but it can be kept dry and is used, above all, in making the argira which is eaten in the summer.

262 The Tuareg like meat very much, but they eat it relatively infrequently; yet some Tuareg say that one should not let ten days go by without eating meat.

The most used meat is goat; mutton is eaten less often, and camel in exceptional circumstances. The meat of

412 /182 cont./ For the harratin, the maalmines make the hoe called aguelhim and the gheniet, which is a trap for wild sheep.

412 The Tuareg use wooden objects made by the maalmines;
415 these are mainly cooking utensils.

Akous: bowl for drinking milk. It often has small ears for easier gripping.

Azzka: is a very large akous capable of holding nearly six liters.

Tarahout: large, almost hemispherical dish, carved out in one piece. The wood is three centimeters thick. It is used for family meals.

/183/ Tarelalt: large dish with a fairly flat bottom; may be as large as one meter in diameter (rare).

Tendi: the wooden mortar.

Iharen: the wooden pestle.

Akabar: small mortar, sometimes pyrographed.

Tesoukalt: pyrographed wooden spoon.

Temoulalt: large pyrographed spoon (ladle).

Asseguefi: small wooden funnel.

Redjeredjaten: stakes for holding up the tent.

Tidjetouin: stakes with ornamented heads for holding the tent open.

492 Tarik (rahla in Arabic): the camel saddle. The maalmines of the Ahaggar repair them but do not make them; the most handsome ones come from the Air; these are the ones called tamazak and the akoka. However, the maalmines of the Ahaggar make a wholly wooden saddle called taïst, sturdy and used mainly for training the animals.

301 The principal jewelry worked in the Ahaggar is the following:

Tisak: the ring, of silver. Certain models have the lower part made of iron. The height of the rings is impressive: four to five centimeters; they entirely cover the lower part of the women's fingers, setting off the length and delicacy of their hands.

6:Blanguernon Y-5 (1937-1954) 1955 MS25 Tuareg MS25
Hoggar

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36. At the Ideles oasis. At right a butter container (tahtint).

[p. 224]

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37. Delou used to keep water fresh.

[p. 225]

6:Blanguernon Y-5 (1937-1954) 1955 MS25 Tuareg MS25
Hoggar

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39. Filling a guerba using a wooden funnel.

[p. 227]

6:Blanguernon Y-5 (1937-1954) 1955 MS25 Tuareg MS25
Hoggar

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40. Harratin family at Tahaggart.

[p. 228]

6:Blanguernon Y-5 (1937-1954) 1955 MS25 Tuareg MS25
Hoggar

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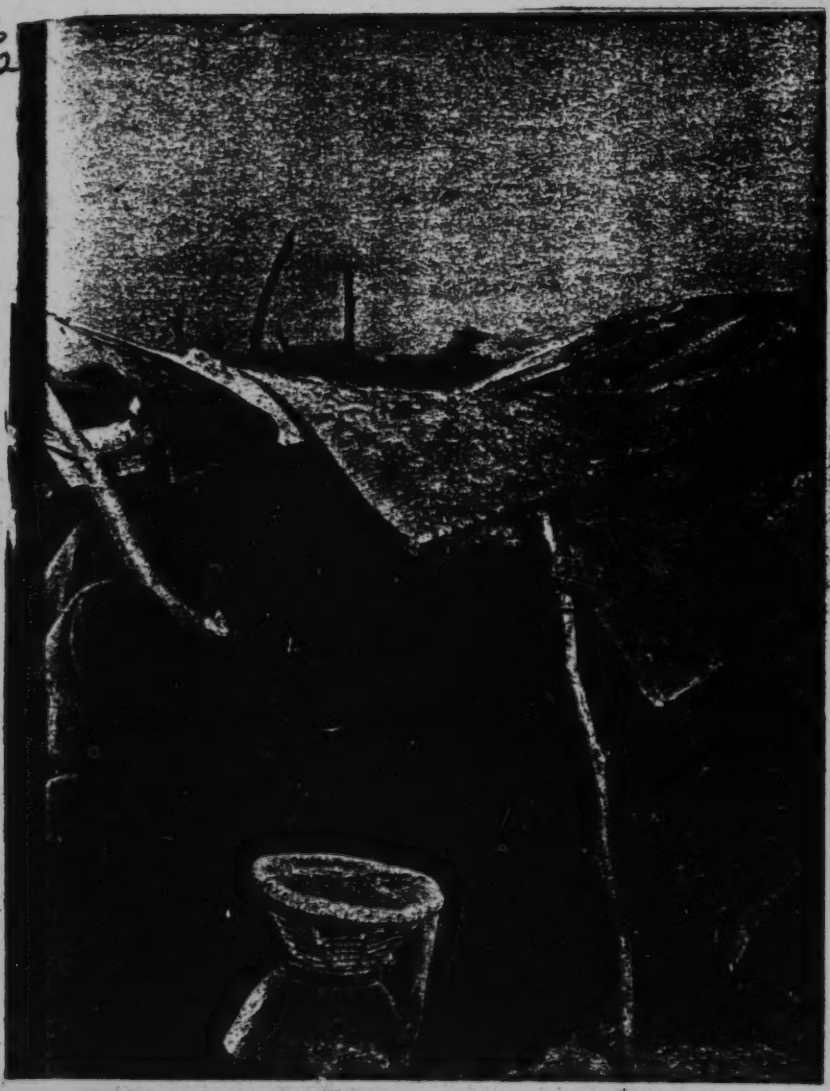

[415]

52b.

[p. 24]

[right - see p. 240]

● 415

[For additional information about utensils, especially various kinds of containers, see category 116, pp. 221-33; 239; 242-43; 245-51; 253-54; 257; 260-61; 265-67; 269-86.]

7:Nicolaisen E-5 (1951-1962) 1963 MS25 Tuareg MS25

end of the *akasa* season. In other words:— When the inhabitants of a camp have their collectively guarded goats divided into two parts, one of these brings forth kids at the time when the other is mated.

This method of mating-regulation is that ideally used by prosperous goat-breeders both in Ayr and among the Northern Tuareg. If in the north a flock is divided into two parts the kids are born in autumn (*awerwas*), and in spring (*tafsit*) the former season being the better. Kids brought forth between these two seasons are known as *amesakar*. But as climatic conditions and consequently also the quality of pastures change from one year to another in the true desert country, the mating-system of division into halves cannot always be practised in Ahaggar and in Tasilé-n-Ajjer. In severe periods of drought goats may be too meagre for mating for a whole year or even longer, during which time the he-goats will have their penis bound. Thus during the dry year 1954/55 no goats were mated in Ahaggar. – It should be noted that the best season for the birth of kids is the late summer or the autumn (*akasa*, *awerwas*) when the tender annual plants spring up. Kids borne at this season will be fully grown for mating after one year so that they bring forth kids at the season of spring (*tafsit*, or *tahsit*), while kids born in spring will be mated after a year to bring forth kids late in summer or in autumn (*akasa*, or *awerwas*).

Milking takes place twice daily – early in the morning before the flock leaves for grazing, and late in the evening one or two hours after the return of the animals to the camp. Milking is done by women, or occasionally by male slaves. The individual animals to be milked are frequently called by their names and a special sucking sound is made to calm the animals, which are milked differently in Ayr and Ahaggar. In Ahaggar the milk-maid holds the wooden milk-bowl (*akus*; Fig. 21b) in her left hand, presses the left hind leg of the goat firmly under the upper part of her right arm, while she milks with her right hand (Fig. 23–24). In Ayr milking of goats is frequently performed in a standing position the milk-maid then holding the milk-bowl (*takabart*; Fig. 37) in her left hand, keeping the left hind leg of the animal firmly between her knees, and milking with her right hand. If the milk-maid milks

Fig. 18. The little stick (*akaru*, *asafru*) used by the Northern Tuareg to prevent half-grown kids from sucking. Ahaggar, the *Ajjak-en-tahlé* tribe. Dimension: the stick 0.056 m; the cords 0.330–0.380 m. (N.M. G. 5825).

7:Nicolaisen E-5 (1951-1962) 1963 ~ ~ ~ ~ ~ MS25 Tuareg MS25

younger animals which yield more milk. Again, the meat of very old goats is of inferior quality. Much goat-meat derives from he-goats of which a very limited number is needed for mating. Some Tuareg claim that one he-goat is able to cover about a hundred goats, but as a rule I doubt whether it would be called upon to do so. In any event, too many he-goats are brought forth, and even very young male kids are frequently killed and eaten as there will be more milk for the nomads when such animals do not have to be suckled. It is considered ideal that male kids which are not needed for reproduction, and which are not killed at very early age, should be castrated at the time when weaning takes place, but even old he-goats may be castrated to make them fat for slaughtering.

Though meat is not a stable dish of the Tuareg they have to kill a certain number of goats every year to obtain skin for the manufacture of various domestic utensils. The roaming life in the desert necessitates a great many containers for water, butter, milk, grain, dates, and the like, and bags made from goat-skin are appropriate for this purpose. Indeed, goat-skin is so important to Tuareg craft that in speaking of the manufacture of most domestic articles one can hardly avoid mentioning the word "goat". Thus, my fairly large collection of ethnographic specimens from the Ahaggar Tuareg contains about fifty different objects made entirely or mainly of goat-skin, which is also used for the manufacture of tents among the Northern Tuareg. Even nowadays, a few articles of dress are made from goat-skin, and goat-skin was in general use for this purpose in the past (cf. p. 287 ff.).

Goat-hair is extremely useful to the Northern Tuareg. The hair is cut once a year in the hot season when the animals do not suffer from cold (cf. Fig. 98). It is spun into strong cords used for tethering animals, for tying up caravan loads, for reins, and the like. In certain tribes of Ahaggar it is also used for a very primitive kind of weaving (cf. p. 265 ff., Figs. 209a–b).

To understand the economic role of goat-breeding one must briefly touch on the question of size of flocks. Statistics concerning the ownership of livestock must always be regarded with much suspicion, as it is extremely difficult to obtain data. It is not only most impolite to ask Tuareg about the size of

Fig. 20. A kid with the stick (*akara, asefres*) pierced through the mouth as described in the text. Tesilé-n-Ajjer, the *Kel Tarwit* tribe.

7:Nicolaisen E-5 (1951-1962) 1963 MS25 Tuareg MS25

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Fig. 21 a–b. Milk-bowls (*akus*, pl. *ikassen*) which are used for milking and for milk drinking.

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a. A bowl made of burned clay like an ordinary earthen pot. These bowls are never used by pastoral Tuareg but by a few sedentary agriculturists of Ahaggar who also manufacture them. Ahaggar, Tamanrasset. Dimension: 0.120 m high with an upper diameter of 0.187 m. (N.M. G. 5821).

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b. A bowl cut of the wood of the *tabarakkat* tamarisk (*Tamarix aphylla*). It is made by a blacksmith, but certain Tuareg women cut similar bowls which are common in all camps of pastoral Northern Tuareg. Such milk-bowls are unknown among the Ayr Tuareg. Ahaggar, the *Afuk-en-tshid* tribe. Dimension: 0.102 m high with an upper diameter of 0.199 m. (N.M. G. 5199).

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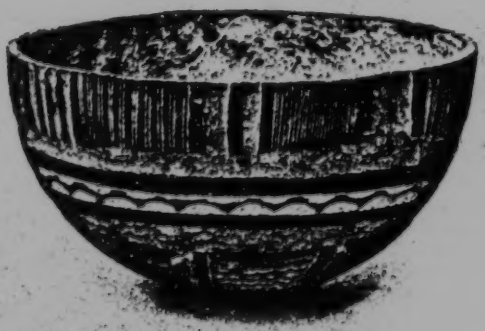

Fig. 22. Calabash of a type which is used occasionally for milking in Ahaggar. It is called *atekkus* (*wa n akh*) or *atekkus* (*wa n tagek*), that is "calabash for milk, or "calabash for milking". Introduced to Ahaggar from the south and bought at Tamanrasset. Dimension: 0.110 m high with an upper diameter of 0.195–0.203 m. (N.M. G. 5823).

7:Nicolaisen E-5 (1951-1962) 1963 MS25 Tuareg MS25

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Fig. 37. Wooden milk-bowl (*akabar*) of the type used in Ayr not only for she-camels but also for cows, sheep and goats. It is carved out of wood of the *turza* tree (*turha* in Ahaggar) (*Calotropis procera*) by a blacksmith. Ayr, the *Imezzureg* tribe. Dimension: 0.285 m high. (N.M. G. 6662).

[237]

Fig. 38. Wooden milk-bowl (*akabar*) of the type used for she-camels in Ahaggar. It was introduced to Ahaggar from the south where it was made by an Ayr blacksmith from wood of the *turha* tree (*Calotropis procera*). The cracked brim is mended with a piece of raw camel hide. Ahaggar, the *Ajjak-en-tehle* tribe. Dimension: 0.240 m high. (N.M. G. 5822).

7:Nicolaisen E-5 (1951-1962) 1963 MS25 Tuareg MS25

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Fig. 39. A very young camel calf tethered in the camp by means of the *témdit* rope depicted below (Fig. 40). Tamesna, Ahaggar Tuareg of the *Iwgnaten* tribe.

she-camels which are difficult to milk because they will not allow the calf to suck. The method has been described to me by Tuareg of Ayr. It is named *arazàk* and is as follows:— Fresh camel-dung is put into the nostrils of the mother-camel, and its nose is thereupon pierced at three places with an awl a hole being made in each nostril and one hole between them. A cord of dum palm leaf is thereupon drawn through these three holes so that the nostrils are firmly closed, and the animal can consequently breathe only through the mouth. It is said that a she-camel which has carried this bandage for one day will be fond of its calf and will allow it to suck so that milking can be done. 234 [1/2]

Milking of she-camels is usually done twice a day, early in the morning and very late in the evening. In Ayr certain Tuareg milk their she-camels several times during the day, as the animals generally graze close to the camp and frequently come to the tents to see their calves. Milking between the two proper milking times may also be done with other domestic animals in Ayr if milk is needed for some purpose or other during the day, but it is practised particularly with she-camels, as milk gathers in the udder of these animals very quickly after milking.

Milking of she-camels is done by two men standing at the sides of the she-camel and leaning their heads against the animal (Fig. 36). One of the men holds the large wooden milk-bowl *akabar* (Figs. 37-38) [4/2] [4/5]

[text continues on p. 61]

7:Nicolaisen E-5 (1951-1962) 1963 MS25 Tuareg MS25

bridge of the nose of a calf, so that it hurts its mother when it tries to suck (Cauvet 1925, I, p. 359). – (3) *akinubab*, that is a plaited muzzle which allows the calf to graze, but prevents it from sucking. I have been told both in Ahaggar and Ayr that such muzzles are used for camel calves, but apparently they do not constitute a normal weaning method. – (4) *asedres* or *ameru* are said to be synonymous terms for the weaning method generally adopted among the *Kel Ferwan* Tuareg of Ayr. The method is as follows:— The upper lip of the calf is pierced on both sides of the harelip so characteristic of all camels. A piece of thin root of the *afagag* acacia (*Acacia Raddiana*) is drawn through these holes so that the ends of the root protude at both sides, and a knot is made at both ends that the root will not fall out. These knots hurt the udder of a she-camel when the calf starts to suck, but this is not the real idea of the device. For the root-piece keeps the pierced holes open and the calf is therefore unable to suck at all.

A she-camel may yield about ten litres of milk at the beginning of its lactation period, but at the end of this period it does not yield more than two or three litres even with good grazing. The yield is always dependent on grazing conditions. Thus during my stay in Ahnet and Ahaggar 1954–55, a Tuareg who owned about twenty she-camels acquired only two litres of milk a day in all from these animals. But conditions of camel-breeding are much better in Ayr and in the southern plains where she-camels are tolerably good milk-yielders most of the year, and camel's milk is therefore very important to some pastoralists of these regions. Camel's milk is drunk and not generally used for food in other ways. It is much esteemed by all Tuareg, who claim that it possesses a particular power and gives strength. It is never stored in the shape of butter or cheese. The Tuareg of Ahaggar and Ayr never eat camel's butter which they consider possesses a poor taste, and, besides, it is very difficult to churn. They make butter of camel's milk only when butter of milk from other domestic animals is lacking for the greasing of the hair. Both in Ahaggar and in Ayr butter is then churned by the men in a rather peculiar way:— A skin bag containing an amount of camel's milk is attached to the riding saddle of a camel which is then ridden at very fast speed for some time. But even with this method, it is said, camel's milk gives very little butter, and it is also definitely stated that the milk cannot be used for cheese-making. These Tuareg statements seem to be confirmed by analyses of veterinaries, who claim camel's milk to contain very little casein, and it has been proved difficult to separate butter from camel's milk (cf. Cauvet 1925, I, p. 707 ff.).

She-camels can mate and yield milk until an age of about 25, and their average length of life is estimated by the Tuareg at about 30 years. But pastoral Tuareg do not generally keep their camels until they die a natural death. In Ayr I was told that she-camels more than twenty years old should be sold or killed. Most Tuareg sell their old camels in the oases of the Central or Northern Sahara where a large population of sedentary farmers is constantly yearning for meat. Very few camels are killed by the butchers of Agadez, where meat from oxen, sheep, and goats is always available and fairly cheap, but a great many old camels are slaughtered at the market places of the oases further north.

Pastoral Tuareg of Ayr very rarely kill their own camels to eat them. They will slaughter a camel which suffers from some severe disease as all animals dying by accident or from disease are unlawful to eat. However, there are also some Ayr Tuareg who will never eat camel's meat. They say that they would feel very sick at heart were they to do so, and some Tuareg even say that they would vomit

7:Nicolaisen E-5 (1951-1962) 1963 MS25 Tuareg MS25

*492 fixed with a rope running under the tail and/or a rope around the camel's chest. The *ẓlaki*-saddle is [184] unknown to the Ayr Tuareg, but I have seen it in use among Arab traders living at Iferwan of Northern [171] Ayr. It is by far the most common type of pack-saddle in both groups of Northern Tuareg.

Another type of pack-saddle named *tebeyut* or *tkhawit* corresponds to the *herej* saddle of the Arabs. It is used occasionally by the Northern Tuareg, but I have only seen it among the *Kel Ajjer*. The saddle-frame is made from date palm ribs and consists of two cross-bars connected with each other by two crossed sticks at both sides. One of the cross-bars rests in front of the animal's hump, the [283] other behind. The frame is lashed together by means of strips of raw camel-hide and is fastened to [563] two pads of palm bast as can be seen from the photograph Fig. 57. As far as I know this saddle-type, like the type above-mentioned, is manufactured by palm-growing agriculturists of the oases. This saddle type seems to be unknown among the Ayr Tuareg.

The proper pack-saddle used among the Ayr Tuareg is known to them as *aruki*. It consists of one [288] wooden arch lashed to two flat boards (Fig. 58). These two sideboards are attached to two pads made from hay stuffed into tubular pieces of dum palm matting. The two pads or mat cylinders are fitted on each side of the camel so that the wooden arch rests in front of the hump. But there is also a rear pad consisting of a stuffed skin-bag laid over the camel's back behind the hump and attached to the wooden arch by means of cords. The loading cords bear on this stuffed skin-bag and on the mat-[564] cylinders in front of the wooden arch. The wooden arch is manufactured by blacksmiths, while the side pads and rear pad are made by the Tuareg. The saddle is not generally fixed to the camel by means of girths or cords. The place of origin for this saddle-type seems to be Ayr. It is used also among the *Kel Geres* Tuareg, and it seems as if related saddle-types occur elsewhere in the south (cf. p. 311).

*492 Transportation bags of various types are used for camel loads, but the very large bags woven from ●415 a mixture of goat's hair and camel's wool so typical of northern Arab pastoralists are not in current use among the *Kel Ahaggar* and the *Kel Ajjer*, and are entirely unknown to the Tuareg of Ayr. The [563] Northern Tuareg generally use bags made from the skin of barbary sheep, or bags made from date palm bast by the sedentary agriculturists of Tidikelt (cf. Fig. 59). In Ayr the Tuareg normally use transportation bags of plaited dum palm leaves.

The ideal load of a camel consists of two bags forming a total weight of up to 200 kgs for a very strong animal. The two bags, which together form one load, are each provided with two short loading loops. They are known to the Ahaggar Tuareg as *elferwet* when bags are woven, as *tadekmert* when the bags are of skin. The loading is done as follows:— The two bags are lifted up and supported against the sides of the recumbent pack-camel by two men who put the loops of one bag into those of the other and insert between them two little sticks, known in the north as *tihdad* (sing. *tehedit*). To unload the camel all one has to do is to pull out the two small sticks inserted between the loops, [17] and the two bags fall to the ground. This same system is also used in Ayr, and, I believe, among all camel-breeders of North Africa. - To secure the load in a fixed position it is very common to surround its two halves with a rope (*akhamil* in Ahaggar), which is laid over the saddle-frame before loading and another rope around the luggage and the belly of the pack-camel is also used if considered necessary.

*492 When camels are taken to the camp from pasture, they are sometimes mounted without a saddle

[text continues on p. 78]

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Fig. 56. The loading of a camel bull carrying the *élaki* saddle. This bull was very fierce. It is provided with an *akala* rope around the lower jaw, and a halter (*amerar*) with a short rope hanging down to facilitate capture. The recumbent position of the bull is secured by a rope passing around the neck and a foreleg. Ahaggar, the *Kel Ahnet* tribe.

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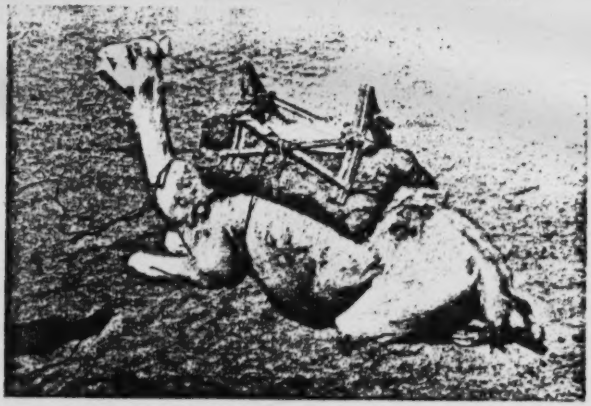

Fig. 57. Camel with a pack-saddle of the *tebeyut* or *tkhawit* type consisting of a frame made of palm fronds attached to two cushions of date palm bast. Tasilé-n-Ajjer, *Kel Ganet*.

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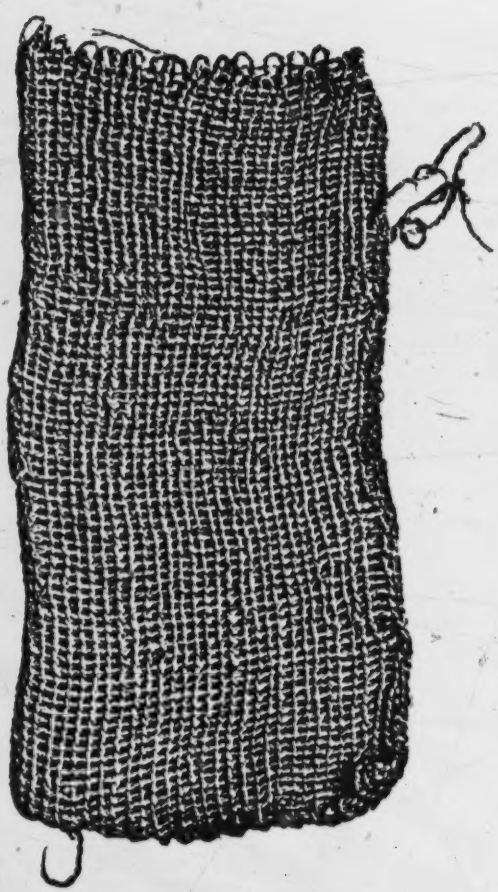

Fig. 59. Transportation bag (*achchebker*) plaited from cords of date palm bast. Made by *Harratin* of Tidikelt, bought at Tamanrasset. Dimension: 1.18 m long, 0.58 m broad. (N.M. G. 5217).

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that it is manufactured by pastoral Tuareg of these regions and not by blacksmiths, though the latter may also make such saddles for their own use. The wooden structure is made of two cross-bars, which are natural prongs fashioned with knife and axe, and these two cross-bars are lashed to each other at their lower ends, or are connected with each other by means of two sticks crossing each other at the two sides. A wreath of slender roots of *afagag* (*Acacia Raddiana*) covered with a network of dum palm rope may serve as a saddle seat, which can also be covered with a piece of matting plaited from the leaves of the dum palm tree. This very simple saddle may perhaps be considered the prototype of the more developed riding saddles of the *térik* and *tahyast* types.

All the above-mentioned types of riding saddles are placed in front of the camel's hump and rest upon two to four saddle cloths, the number depending upon their quality and also upon the nutritional condition of the animal. Two saddle-cloths are considered enough for a fat camel while four should be applied to a very thin one. Saddle cloths are frequently called *ésatfar* (Ayr) or *asetfer* (Ahaggar), but this name is in fact used for everything placed upon the back of an animal to protect it against galling from the luggage and/or the saddle. Saddle cloths for camels are properly termed *éselis* (Ayr) and *anneslak* (Ahaggar). Both among the Northern Tuareg and in Ayr saddle cloths are generally made of cotton, but they are also made from dum palm matting and a piece of leather among the Ayr Tuareg (Figs. 66–67). The riding saddles are fixed to the camel by a single girth known as *ahayif* (Ahaggar) or *azaw* (Ayr). In the north such girths are normally made from goat-hair while the Ayr Tuareg use plaited leather (goat-skin). Girths in both regions are frequently furnished with a very large tassel hanging down from the right side of the camel (Fig. 69). On rare occasions when the Tuareg ride their camels with all possible speed, e.g., at the annual camel races organized by the French administration, the riders often secure the position of their saddles by means of a long cord (*ihwéweren* among the Northern Tuareg) tied around the hind part of the camel as shown by the photograph Fig. 68.

The camel rider sits in the saddle cross-leged with his feet resting upon the camel's neck. To accelerate the speed of his riding animal he pushes one of his feet against its neck in step with the rocking gait peculiar to camels. A whip (*alekkod*) also belongs to the equipment of the rider. Most whips have a single lash made from a twisted strip of hide, but whips provided with two lashes of hide attached to a wooden handle are also found and are common in Tasilé-n-Ajjer (Figs. 70a–b). The whips used in the north are said to be made from camel's hide soaked in water; the raw hide is twisted and kept in this position until it is dry. The Ayr Tuareg say that camel's hide is not well fitted for whips, which among them are manufactured from the raw hide of a newly-killed ox. A piece of this hide is twisted and left to dry as in the north. The handle of the one-lash whip is made of cotton wrapped around the upper part of the lash and covered with coloured goat-skin.

The Ahaggar Tuareg have a particular implement to hasten the speed of riding camels. It is described in literature notably by Foucauld. It consists of a slender iron rod 0.35–0.50 metres long, fixed into a wooden handle. It has a small crook much like that of a staple and is used for scratching the animal and thus to incite it to greater speed. It is called *azalla*, or *asekred* (Foucauld 1951 52. II. p. 856 & IV. p. 1960). I have never seen this peculiar implement among the Tuareg.

A camel rider's equipment comprises various types of skin bags of which the most common is a

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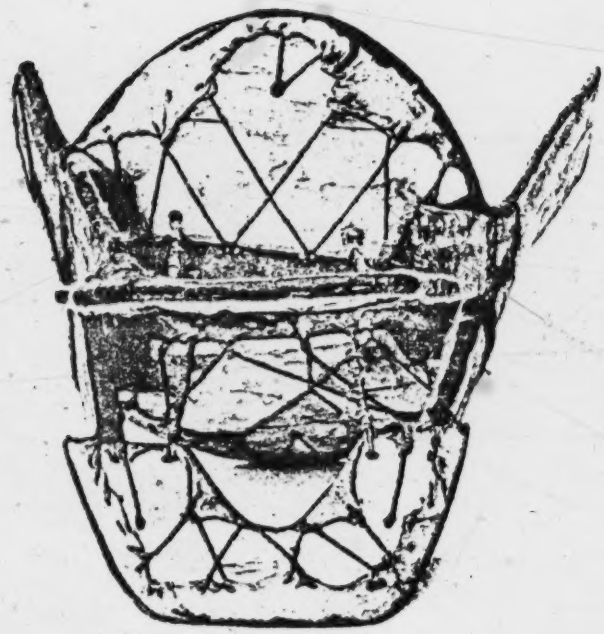

Fig. 63b. cf. Fig. 63a.

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●415 huge saddle bag known as *ejjebira*, manufactured exclusively by the sedentary people of Agadez, the *Imeggedezen* (Fig. 72a). Other bags are often used by riders and some of them will be mentioned in the description of skin and leather work.

[283] An important part of the rider's equipment is the drinking bowl (*tamennast*) made from metal and attached to the saddle pommel with a plaited leather cord (*témetrek*); it is particularly common
*492 among the Northern Tuareg (Fig. 71). The Tuareg also possess a great many objects which serve
[331] exclusively as ornaments for riding camels. The Northern Tuareg adorn their animals with a collar (*tahawt*) made from fine cords of goat's hair, while the Ayr Tuareg use another type of collar called

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Fig. 70a–b. Tuareg camel whips (*alekkoḍ*, pl. *ilekkaḍ*).

a. Whip with a single lash. Collected in Ahaggar by Olufsen. Dimension: 1.08 m long. (M.N. G. 1.138).

b. Whip with two lashes. Tasilé-n-Ajjer, the *Urayen* tribe. Dimension: 0.845 m long. (Author's collection).

Fig. 71. The drinking bowl (*tamennust*) made from tinned brass and fixed to its ornamented leather cord (*témetrek*) by means of which it is attached to the saddle pommel (cf. Fig. 49). Ahaggar, the *Aguh-en-tehlé* tribe. Dimension of the bowl: 0.258 m in diameter (upper part). Dimension of the leather cord: 0.685 m long. (N. M. G. 5287).

*492 562 donkeys, but, as in the North, they sometimes mount the riding camels of men sitting across the animal behind the saddle.

*492 531 233 192 The Tuareg take a keen interest in the adornment of all objects used for riding camels. The richly decorated saddles and the ornaments of the riding gear express the particular value attached to the animals used for riding. But Tuareg interest in camels is perhaps more clearly understood, when we consider their rich camel vocabulary.

The Tuareg have one word which can be used for any camel regardless of its sex and age, its colour, and all other particular qualities. This word (*amaġur*, pl. *imuġar* in the northern dialect) does not seem to have its equivalents in vocabularies of other domestic animals which collectively are referred to by means of a sex term of adult animals (e.g., *ulli* = "goats"). The word *amaġur* (pl. *imuġar*) is used in conversation, but it is heard less frequently than camel terms which have a very definite meaning.

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Fig. 72a–b. Leather bags for camel riders.

a. Large saddle bag known as *ejjebira* (*eljebira*) and used by all riders. Collected in Ahaggar by Olufsen, manufactured by the *Imeggedezen* of Agadez (Ayr). Dimension: 0.70 × 0.70 m. (N.M. G. 1.108).

b. Large luggage bag (*ebaun*). Collected in Ahaggar by Olufsen. Dimension: 1.20 m long. (N.M. G. 1.136).

In a few words camel vocabulary has the characteristics mentioned under the following items:— (1) Sex terms; (2) Age terms which, like most camel terms, also refer to the sex; (3) Colour terms; (4) Terms for very special qualities; (5) Terms for camels according to their training and use; (6) Terms for camels in very definite situations; (7) Terms for the number of camels in a herd; (8) Many entirely synonymous terms.

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The Northern Tuareg use the term *amis* (pl. *imnas*) for all male camels including geldings, and the term *talemt* (pl. *tellemin*) for all she-camels. In Ayr a male camel is known as *alem* (pl. *imnas*) and a

[text continues on p. 95]

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of riders and their camels. This is intimated by the following poem quoted from Foucauld's excellent books on the poetry of the Ahaggar Tuareg:—

Ébeydeg, é ti n ami mellen	My white camel, O woman with white teeth
W-allahi! idęg ul ifel kem	I swear by God, it shall not go raiding, shall not leave you
Ula daṛ ikk am akal ien	It shall not go away from you to another country
U t ḍineṛ ar y arabuh ennem	I lead it to the pastures only to visit you with love again
Ula tahargit d asemmęḍren	Neither in dreams nor in thought
Innin é ham yekk akai ien	Shall it go away from you to another country

(cf. Foucauld 1925-30, I, p. 210 f. for a literal translation).

DONKEYS

Donkeys are very important domestic animals in the Tuareg groups I have studied. Most animals are grey or greyish but there are other colours for which the Tuareg have special terms. From Ahaggar the following colour-terms can be mentioned:— *adebara* (greyish), *afawa* (greyish with a white stomach), *ewriṛ* (yellow-brown), *ehenbey*, or *takenbawt* (donkey with a black head), *ekawél* (black). Black donkeys seem to be more common among the Arabs of the Northern Sahara than among the Tuareg.

Donkeys vary less in colour than other domestic animals among the Tuareg. It is interesting to note in this connection that there are fairly big herds of wild donkeys, or asses, in the mountainous massifs of Ahaggar, Tasilé-n-Ajjer, and Ayr. These animals are generally greyish like most domestic donkeys.

Fig. 83. Women carrying cereals in skin bags loaded on donkeys. Ahaggar, the *Dag Ḥali* tribe.

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household goods during nomadic migrations, and are employed daily in all camps to carry water in skin-bags from wells and waterholes to the tents. They are very strong animals considering their low stature, and good pack-donkeys can carry up to one hundred kilograms even for very long trips. Donkeys are occasionally used for long journeys by the Northern Tuareg, and many Ayr Tuareg use them to fetch provisions of millet around Tanut in Damergu. Caravans of donkeys are frequently observed in these regions, and one even sees mixed caravans of donkeys and camels. There can be no doubt that before the introduction of the camel the donkey was still more important for riding and transportation than is the case nowadays. This is clearly demonstrated by historical material from Egypt and adjacent regions (cf. Erman 1922, p. 518 f., 529, 592 f., 636).

It has already been mentioned that donkey's meat and skin are not utilized nowadays by the Tuareg. The same is true of mare's milk which, however, is used as a remedy against a kind of cough known to the Ayr Tuareg as *khamkham*. There is no regulation of mating for donkeys which in many ways are semi-domesticated animals. In Ayr male donkeys are never castrated, while the Ahaggar Tuareg say they castrate such stallions as constantly run after the mares and in this way cause too much trouble. The Tuareg also have no methods to prevent foals from sucking, while a method of this kind is sometimes applied by sedentary people in and around Agadez. This method known as *éfinjar* consists in the cutting of the nostrils of half-grown foals so that they cannot suck pregnant mares. Both stallions and mares are used for riding and transportation, but female animals are much preferred for these purposes. Mares are used almost exclusively for the transportation of water-bags hanging under the animals, as the bags might be squirted by stallions' urine.

The Northern Tuareg saddle their donkeys, using the same saddle type for riding and for transportation (Fig. 86). This is known as *aruku* and is manufactured by the women in the following way:— Two fresh boughs of the *tahunek*-tree (*Rhus oxyacantha*) are heated, or slightly burned, over the fire. The boughs are thereupon barked and bent into the curved form wanted, and are then kept in this position by cords. After drying for a few days the boughs will retain their curved form, and the cords are untied. The boughs are then cut up and their ends are connected by two pieces of camel's hide soaked in water, and sewn together by means of a large iron needle (*tasugla*, or *tasubla*) (cf. Fig. 220b) and a thread which is also cut from camel's hide. The wooden saddle frame is attached to three cushions. These cushions are generally made of goat-skin or sheep-skin stuffed with hay or with date palm bast, but may also be plaited from leaves of the date palm tree. Cushions made from goat-skin are sewn together with strips of the same material by means of the little awl known as *tistent* (cf. Fig. 218a). The two long cushions resting lengthwise upon the animals back are known as *tastek*, and the small cushion resting over the animal's back close to its shoulders is called *tafelledut*. The saddle is fixed to the donkey by two girths consisting of cords made of goat-hair. One of these cords (*tidmechart*) passes under the tail, the other (*ahayif*) is tied around the chest of the animal. This saddle type is well fitted for the transportation of burdens and in particular of water-bags, the cords of which are attached to the pommels. When the saddle is used for riding it is frequently covered with a blanket or a piece of cloth. Saddles of this type are found in all camps of the Northern Tuareg, and Lhote states that they are also found in Adraɾ-n-Foras and in Ayr (Lhote 1947a, p. 120). This may be so, but I have myself never seen them in the latter region where they are unknown to the *Kel Ferwan*

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Fig. 90. Tuareg dogs of the breed which is common among the Ayr Tuareg. Dogs suffer much from heat in summer when they hide under water-bags. Ayr, the *Imerzureg* tribe.

DOGS

231 The Northern Tuareg distinguish between three types of dogs (sing. *eydi*) as follows:— (1) a long-haired breed (*aberhoh*); (2) a short-haired slender breed (*akhami*); (3) a very slender and elegantly
[173] built greyhound (*ozka*) (Fig. 91). The Ahaggar Tuareg speak of a tradition, according to which the greyhound (*ozka*) was introduced fairly recently through contacts with the Northern Arabs. The Ayr Tuareg do not make similar distinctions between dog breeds. They have only one breed which is known as *ijji* (Fig. 90). It is short-haired and slenderly built though less so than the true Arab greyhound.

[136] Dogs are kept to guard the camp and in particular to protect the animals from the attack of jackals or hyenas during night. If the Tuareg had no dogs it would be most difficult for them to breed goats and sheep. Dogs may also follow the flocks in daytime to protect the animals against beasts of prey, though this is not generally considered necessary. Dogs are not trained as "sheep-dogs", but it is said that a few "intelligent" dogs will assist the herdsman in keeping the flock together during grazing,
[224] and many dogs will drive away domestic animals which belong to foreign flocks. Some Tuareg use dogs in hunting barbary sheep, gazelle, antelope, and hare (cf. hunting, p. 159, 166).

[171] It is well-known that the Arabs consider the dog an unclean animal. This is also so among Arab nomads of the Sahara, but they do not consider their greyhounds unclean in this sense. Thus pastoralists of the Chamba group told me that among them a fine greyhound is esteemed in much the same way as are noble riding horses and camels. The Tuareg have very few true greyhounds and
[521] I do not believe that they have this same feeling of interest in them. But many children and young
[541] people are fond of all types of dogs, and one can hear them discuss the qualities of their animals and the daily dogfights which are considered a kind of entertainment to everybody in the camp.

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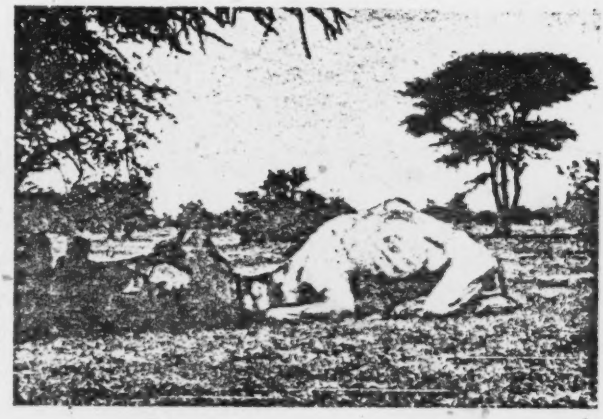

Fig. 95. A Tuareg feeding his riding camel with *afezu* grass (*Panicum turgidum*). Many Tuareg feed their riding animals with stems of this perennial grass – partly to obtain a docile camel for riding, partly to change its fodder which consists largely of acacias and annual plants. The photograph is taken near Agadez at the *akasa* season. Annual plants grow between trees and bushes (*afagag*, *Acacia Raddiana*; *ebezgin*, *Salvadora persica*; *tadent*, *Boscia senegalensis*). Ayr, the *Isakaranan* tribe.

than those mentioned. Thus they can use any kind of receptacle for milk and milking, and they do not clean their milk-bowls with urine as is normal among certain East African stock-breeders, and, perhaps, also among certain of the Fulani living south of Ayr. The taste of urine is detested by the Tuareg, who know this taste all too well as the water drawn from pools and wells is frequently flavoured with urine and the excrement of domestic animals. Nor is camel urine used by Tuareg women for hairdressing as is done among the Arabs, but it is said that it may have a medical value in curing wounds. The custom of drinking blood has been mentioned above (p. 122 f.) and will be described later (p. 235).

The Tuareg apparently have comparatively few superstitious usages in stock-breeding, which is mainly to be considered rational. We have seen that stock-breeding is adapted to environment, and we have also mentioned that there are veterinary methods which doubtless have their origin in considerable knowledge of the anatomy and physiology of domestic animals. This knowledge forms one corner-stone of rational stock-breeding, and another is the very detailed knowledge of botany. In Ahaggar there are more than 600 different plant species for which the Tuareg have particular names, though a few related species are sometimes known by one and the same name. Every Tuareg know about the ecological conditions of these plants, and he knows exactly their fodder value for domestic animals. He knows that certain plants form excellent fodder for all domestic animals, but he is also well aware that the different types of stock have different needs, so that certain plant species are valuable for camels, other species for other domestic animals.

The Tuareg are occasionally cruel to donkeys, and to dogs, but they take the greatest care of all other domestic animals to ensure their wellbeing and reproduction. Women bring acacia pods or tender annual plants to kids, lambs, and calves, and to sick animals which remain in the camp. On long trading expeditions, when the camels have little time for grazing, some Tuareg will walk along

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221 *233 824 tagayt, while the *Iwllemmeden Kel Dennek* at this period will camp around Ingal. Many Southern Tuareg leave the savannah country to avoid its heavy rainfalls and stock-diseases to let their animals benefit from the salty water and plants in the *Azawaɣ* country.

133 162 137 In the country west of the Ayr Massif, the Tamesna Plains, there is in addition to the Ayr Tuareg a numerous population of Ahaggar Tuareg who live constantly in these regions. These plains are botanically different from the mountains. Perennial vegetation is scarce though there are some *tamat*-acacias (*Acacia flava*), but there is a very rich vegetation of annual plants of great importance to *233 824 domestic animals. Among these plants can be mentioned *alwat* (*Schouwia purpurea* ssp. *Schimperi*), which is very valuable for camels and also good for sheep, *adreylal* (*Astragalus Vogelii*), and *tagellet* (*Colocynthis vulgaris*). The two latter plants are valuable as fodder for all domestic animals. It is noteworthy that these three species of annual plants last longer than other annual species. They do not wither at the beginning of the *ɣarat*-season, but remain fresh and green all through the winter until about *tabsit*.

It is evident that Tuareg knowledge of botany is extremely comprehensive, and that they use this knowledge to make stock-breeding as rational as possible. They may perhaps not be so rational in protecting pastures, for they cut acacias' boughs to feed the kids resting in the camps, and it is most possible that they also overgraze certain pastures. However, the grazing grounds are very vast in comparison with the number of pastoralists, and I believe that overgrazing and arboreal devastation take place mainly around villages and towns where the flocks of sedentary people graze continuously in the same area. In Ahaggar the valuable fodder plants and plants which are important for collecting are often protected for two or three months in order that they may become fully developed (cf. p. 150, 179).

*233 The Tuareg take great care that their animals do not lack water. It is true that camels and also donkeys can do without water for many days even in summer, but at this season camels should preferably be watered every two or three days, and goats are always watered every two days when the weather is hot. In winter the animals are not watered so often, and this is true particularly if the animals feed on fresh annual plants. Camels can do without water even for weeks and months under such favourable

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Fig. 97. The leather bucket known as *ajo* to the Northern Tuareg. The leather is tied to an iron ring made by blacksmiths. Collected in Ahaggar by Olufsen. Dimension of the iron ring: 0.275 m in diameter. (N.M. G. 1.51).

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Fig. 98. A slave watering goats by means of the leather bucket called *ağa*. Water is drawn from a well and poured out into a hole dug in the clayey ground. The goat standing to the left is sheared – a token of the summer season. Tasilé-n-Ajjer.

*233 conditions, and herdsmen, who live with camelherds far away from camps and wells subsisting on
272 camel's milk, do not consider water necessary. Should domestic animals have eaten salt or salty plants
271 they are very eager for water even in winter. When I lived in Ahaggar with my camels during the winter 1954/55 they had rightly to be watered every ten days, but in regions where they fed mainly on saliferous plants they had to be watered more frequently. However, domestic animals must not be watered too often as this would make them slow and emaciated, and a camel must not be worked too hard the day after it has been watered.

312 Tuareg camps are always found around wells, pools, or other types of water places for which there
361 is a large vocabulary. But the Tuareg never camp too close to water places where there is little pasture, many foreigners and consequently little peace. The distance from camp to water place varies, but is
432 very frequently 1–3 kilometres. During the rainy season (*akasa*) water is very aundant all over Ayr, but outside this period conditions of water supply for human beings and livestock are more favourable
415 in the north than in Ayr, where water most of the year must be drawn from wells. To raise water the Tuareg use a leather bucket known to the Ahaggar Tuareg as *ağa* (Fig. 97–98). The water drawn for
237 the animals is poured out into a hole dug in clayey soil, or into a hole covered with a piece of skin or leather known in Ahaggar as *tafarawt*. This skin is nowadays frequently substituted by canvas (cf.
312 Fig. 99). Where water is scarce and must be drawn from narrow wells, as in Ayr during the summer
574 season, the watering of flocks and herds gives rise to frequent quarrels between pastoralists. For
423 though the right to the use of wells is free to all there are many disputes and fights frequently

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Fig. 111. Skin bag of *téchchékwat* type made from a jackal's skin. The Ahaggar Tuareg believe that people who conserve their money in a skin bag of this kind will have good luck in trading. Ahaggar, the *Dag Rali* tribe. Dimension: 0.63 m (F.M. 283).

Hunting

For the pastoral Tuareg hunting is not an important occupation, and nowadays it is practised mainly by those few Tuareg who possess rifles or guns. Traditional hunting methods are thus of far less consequence than in the past, but some of them are very interesting and most significant for a historical analysis of Tuareg culture.

AHAGGAR

Northern Tuareg areas are not very rich in game. In Ahaggar the main types of game are the gazelle (*ahenkof*, fem. *tahenkof*; *Gazella dorcas* sp.) and the barbary sheep (*iulad*; *Ammotragus lervia*). The big gazelle (*énir*; *Gazella dama permista*) and the addax antelope (*amellul*; *Addax nasomaculatus*) are very rare; they are occasionally seen in the plains outside of the mountains. The ostrich (*anhél*; *Struthio camelus*) was very common in the past, but is now exterminated.

The small gazelle is rare and shy within the Ahaggar Massif, while fairly abundant and comparatively easy to hunt with a rifle in the northernmost massifs and their surrounding plains. Of seven camps visited in Ahnet 1954, gazelle hunting was engaged in by the members of two households, and I estimate that they killed one or two gazelles every week. In most camps of the Northern Tuareg there are no true gazelle hunters, and when a rare gazelle is killed its meat is easily eaten in one day by the members of a single household – in addition to three or four pounds of wheat-bread or millet-porridge. Gazelle skin is of little practical value to Tuareg craft. It is not generally used for the manufacture of important domestic articles such as water bags and containers for milk and butter, but it is suitable and much esteemed for certain types of decorated leather work and for fine leather cords, e.g., necklaces for amulet cases, reins for riding camels.

Barbary sheep are extremely shy, and they live mainly in inaccessible mountains. They are still fairly common in certain isolated parts of the mountains, but they were more numerous in the past when hunting was practised without rifles.

The Tuareg estimate that the amount of meat obtained from two gazelles corresponds to the meat of one grown goat, while a big barbary sheep provides as much meat as that of four goats. Meat of barbary sheep is better suited for drying than meat of other game animals, and the thick hide of these animals is valuable for the manufacture of tents and for large bags used for the conservation on journeys of dates, grain, flour, and the like. The horns of barbary sheep are used as butter containers (Fig. 165), and some Tuareg add the powder of crushed horns to butter before heating it (cf. p. 222). Barbary sheep are of greater economic value to the Ahaggar Tuareg than other types of game, and

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is refused by noble Tuareg and in general also by vassals. One reason for this is that the Tuareg have a myth saying that the *aṛaṭa*-lizzard is the ancestor (the mother's brother) of the noble Tuareg. Some vassals claim that it is the ancestor of all true Tuareg, but this statement does not agree with mythology (cf. Benhazera 1908, p. 61). However, this lizzard is eaten mainly by slaves and by certain agriculturists, though its meat is considered a remedy against snake-bite and scorpion stings (cf. Lhote 1951a, p. 168 f.). The head of an *aṛaṭa* is considered an excellent amulet against these poisonous animals (Lhote 1951a, p. 168 f.), and the skin of this lizzard is not only utilized for the manufacture of amulet cases but also for small bags of various types (Fig. 116a).

Small animals are not necessarily killed with any particular hunting implement. The animals may be taken with the hand or killed with sticks and stones, as is the case with the hedgehog (*ékenisi*, *tékenisit*), which is eaten by some people, and with small rodents. Even hares can be taken with the hand when they hide in the grass or under rocks. The hunter may then approach the hare swinging one of his sandals over his head. This, it is said, makes the animals believe that it is hunted by a hawk or an eagle, and it will therefore remain stubbornly in its hiding place. Even gazelle are sometimes taken without any proper hunting weapon. Some Tuareg say that on journeys through the barren desert country in the summer they have met gazelle so exhausted from thirst that they could take these animals with their hands. Although this is rarely possible, I know Tuareg who have crept up to gazelle hiding from the sun in daytime and killed them with a stone. Finally it can be mentioned that the

Fig. 116a–b. Two small skin bags.

a. Skin bag (*abelḫoḳ n aṛaṭa*) made from the skin of the big *aṛaṭa* lizzard (*Varanus* sp.). Ahaggar, *Ḫarratin* of Taṛhawhawt. Dimension: 0.325 m long. (N.M. G. 5834).

b. Skin bag (*abelḫoḳ n témerwelt*) made from hare-skin. Ahaggar, bought from *Ḫarratin* at Taṛhawhawt, manufactured in the *Afuh-en-tehid* tribe. Dimension: 0.350 m long. (N.M. G. 5833).

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Fig. 123. Digging stick (*ɗawəg*) which serves to dig up wild edible roots and other purposes. Ahaggar, the *Dag Ɣali* tribe. Dimension: 0.883 m (total length). (N.M. G. 5252).

Fig. 124. The wild plant *ihakelewen* (sing. *ahakel*) (*Cistanche Phelypaea*) which yields edible roots esteemed for food (bread). Tasilé-n-Ajjer.

Fig. 125. Skin bag of the *téchchékwat* type made from the skin of a kid and containing *adamam* berries (*Osyris alba*). The berries are normally eaten fresh, but are also conserved in skin bags to be eaten later after soaking in water. Ahaggar, the *Dag Ɣali* tribe. Dimension of the skin bag: 0.33 m. (N.M. G. 5244).

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ajako. According to Foucauld a small annual edible plant growing in the Ahaggar Mountains at an altitude above 2000 metres (Foucauld 1951–52, II, p. 712). Maire mentions this plant as unindentified (Maire 1933, p. 263).

Collecting is mainly the task of women, but males – particularly uninitiated boys and slaves – also participate. Seed-plants are generally harvested by rubbing the ears of the plants between the fingers, but the *tullult* grass (*Aristida pungens*) is cut with a sickle (*amreh*; Fig. 143 a–b) to be thrashed and winnowed like wheat and barley. Edible roots are frequently collected merely by hand. However, a digging stick (*élaweg*; Fig. 123) provided with an iron point is also used to dig up certain wild plants such as *ahahel* (*Cistanche Phelypaea*) and similar root plants. This digging stick is characteristic of vassal women who use it for many different purposes, e.g., to make holes for tent poles.

The very best among the above mentioned seed-plants is the *tullult* grass (*Aristida pungens*). Its seeds are collected or harvested by certain Tuareg inhabiting the lower parts of Ahaggar, but are important particularly to the Tuareg living in and around Tasilé-n-Ajjer. Within the Ahaggar Massif the most important seeds are those of *afezu* (*Panicum turgidum*) and *tawit* (*Chenopodium Vulvaria*). The right to collect these seeds is free to everybody, and Tuareg of the *Abada* zone may send their slaves to the *Atakor* zone to collect *tawit*-seeds in the mountain plateau of Asekrem. The species of *afezu* and *tawit* are sometimes protected by an ban on grazing for three and two months respectively in order that their seeds may grow ripe for collecting. The right to put a ban on grazing of the two species belongs to the Tuareg in whom territorial rights of a sub-area are vested (cf. p. 150). It is said that under very favourable conditions a single household may collect some hundred kilos of seeds of the two plants mentioned. This may seem rather impressive, but even in good years when milk is abundant collecting will not provide pastoral Tuareg of Ahaggar with sufficient vegetable food, for seeds of wild plants are far less nourishing than are grains of wheat, barley, and millet. The collecting of wild plants important for food is as dependent on climatic conditions as is stock-breeding. In dry years, when domestic animals yield little or no milk at all, there will also be no wild seeds for collecting.

Fig. 127. Very small bag known as *élem* ("skin") made from a kid's scrotum (*tigassaït*). The bag contains a piece of resin of the *tamat* acacia (*Acacia seyal*). This resin is eaten by the Tuareg as a remedy against stomachache. Ahaggar, the *Aṭṭuh-en-tehlé* tribe. Dimension of the piece of resin: 0.07 m long. (F.M. 149a–b).

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243 [262] Wheat and barley grown in winter constitute the most important crops in Ahaggar, but, as mentioned, the gardens are also cultivated at other seasons, and crops of millet and sorghum taken in summer are most important subsistence for irrigation farmers in Ahaggar. Millet is known to the Tuareg as [171] *énélé*; it seems to be the same species as that so widely grown by African agriculturists of the savannah [221] countries (*Pennisetum typhoideum*, or *P. Americonum*). Millet is sown in June-July and harvested in September, or in October. Little work is involved with the cultivation of this plant which is never watered [461] much (cf. p. 184), and the agriculturists do not carry fresh soil to the millet plots as they do to plots of wheat and barley. Species of sorghum are less important than millet. The common species is known as [386] *abora* or *tafsut* (*Andropogon Sorghum*). Another species is known as *tallak*; it has smaller seeds than the species just mentioned, and is grown mainly because of its stems, which are reduced to powder to be used for dyeing skins red (cf. p. 282).

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Fig 135. Basket (*téreni*) of the type used for transportation of fresh soil to old garden land. It is plaited from straps of date palm leaves (*afum*) and has handles of rope made from date palm bast (*asan*). Soil is also carried to gardens in larger baskets (*taherirt*, pl. *tiyrar*) loaded on donkeys. Ahaggar, Abalessa. Dimension: 0.22 m high, 0.35 m in diameter at the rim. (N.M. G. 5285).

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Fig. 142. Tomatoes (*tomatem*; *Solanum lycopersicum* and a type of melon (*tazenut*; *Cucurbita* sp.) cut into slices and left upon a layer of straw for drying. A basket (*tésemt*) filled with ears of millet (*énéd*) is seen in the front. Ahaggar, *Ahl Azzi* Arabs.

from Constantinople, and the true *Imeggedezen*, it is said, came from the same region. They were kinsmen of the Sultan who came to see their relative Sultan as guests or visitors and therefore acquired the name "*Imeggedezen*". They founded the city of Agadez, though it is said that sedentary people of the *Itésen* group of Tuareg were already living at this place. The city of Agadez seems to have been founded in the 15th century shortly after the foundation of the Sultanry which was established 1405 A.D. (cf. p. 414 f.). I shall return to the problems connected with the establishment of Agadez in a later chapter, and shall here content myself by saying that Agadez was established as a trading post, which also became the seat of government of Ayr, and the town never seems to have been a true agricultural settlement. There are no gardens, and even drinking water is very scarce and fetched by the women from outside of the city at wells and in river beds. The *Imeggedezen* are mainly city dwellers though there is a small population of agricultural *Imeggedezen* that possesses gardens at Alarses, a few kilometres north-east of Agadez.

In Barth's days the main language of the sedentary Agadez population was *Sonray* (Barth 1857, I, p. 504). This is still spoken by a few people within the city, and it constitutes the traditional language of the people inhabiting the oasis of Ingal (1.430) west of Agadez. These Sonray-speaking people of Ingal, known to the Tuareg as *Isawegen*, subsist mainly upon their palms which yield dates of an excellent quality, and they do not otherwise engage much in agricultural activity. In the winter season some of these people settle in Tegidda-n-tésemt towards the north to work in the salt pits. Trade and crafts are also important industries to the sedentary people of Ingal, which owns a market.

Throughout the Ayr Massif there are many agricultural villages in which the farmers live in straw-huts, and in houses built of stone and mud (cf. p. 327 ff., Figs. 246 ff.). Most people of these villages belong to the group of *Kel Ewey* Tuareg, but there are also some agriculturists who belong to other Tuareg groups, e.g., the *Itésen* (cf. p. 330, 412, 414, 417 f.). The *Kel Ewey* Tuareg originally came from the north as true fair-skinned Tuareg, but in Ayr they mixed with an ancient negroid and Hausa-speaking population that subsisted on agriculture.

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Fig. 144. *Kel Ewey* woman winnowing grain by shaking it in a plaited bowl. Ayr. Iferwan.

243 large mortar. Winnowing of cereals is performed by shaking the seeds in a plaited bowl or tray to let
[415] husks and other impurities be removed by the wind (Fig. 144).

251 The Northern Tuareg use the following means for storing of crops:— (1) *taddat*, that is a skin bag
343 containing grain, dates, and the like, hidden under stones and rocks in the mountains; (2) *égend*, or *anu*, an underground storeroom lined with mats. It is used for cereals, including wild seeds, and is found both among agriculturists and pastoralists (Fig. 146); (3) *tarassana*, a grain silo built from stones and mud (Fig. 145). Nowadays such storerooms are not only used by agriculturists but also by pastoralists. However, this type of storeroom is said to have been introduced to Ahaggar with the introduction of irrigation agriculture about a hundred years ago, and was originally unknown to pastoral Tuareg.

[134] Among the *Kel Ferwan* Tuareg all storerooms for cereals are known as *tédengewt*. The storing of vegetable food products in skin bags covered with stones or hidden under rocks is apparently unknown – perhaps because of the numerous small rodents and the rich insect life which includes numerous white ants. Underground storerooms like those of Ahaggar are used by agriculturists and pastoral Tuareg alike. They are frequently excavated so deeply that they can hide a grown man standing in

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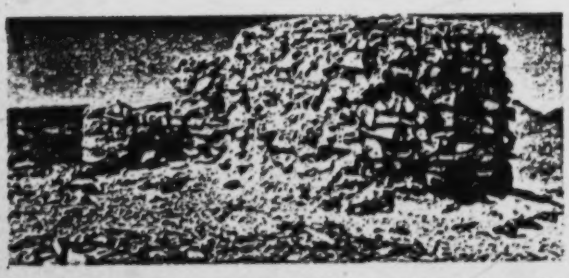
them. They are lined and covered with mats as in Ahaggar, and though they may be used for the storage of wild seeds they are mainly used for grown cereals and are generally found in or close to gardens. Grain silos built of stones and mud – the *tarassana* type of Ahaggar – are said to occur among the *Kel Ewey* but I have never seen such storerooms in their villages, nor have I met the typical African storeroom built of straw and resting upon poles until south of the Massif in Damergu where they are used by shifting cultivators. Large earthenware containers shaped like cooking pots are used to store vegetable products (cereals) in certain villages, particularly at Iferwan. Pastoral Tuareg of Ayr have the underground storerooms for the preservation of surplus grain and other vegetable products. Cereals to be consumed in the camps (notably millet) are kept in large skin-bags resting upon poles that they may not be damaged by white ants. The Ahaggar Tuareg also preserve cereals in their tents in skin-bags.

Irrigation agriculture is a strenuous task, but it is less influenced by climatic conditions than all other occupations practised in the Sahara. The farmers are not exposed to the same disasters of drought periods as are pastoral Tuareg in the north, though it is said that rain is a direct blessing also to irrigated crops. But cultivated plants are exposed to certain dangers, e.g., locusts, and crops do not always thrive as they should. Bad luck in agricultural activities may in the opinion of the farmers be due to some mystical power or other. It may arise from incorrect treatment of cereals and dates so that they lose their *elbaraka*. Menstruating women, as mentioned above, are dangerous to vegetable food, and this is also true of the fire, for which reason one should never throw date kernels into the flames. The farmers also fear that their crops may suffer damage from the attack of the *Kel Asuf* spirits, and particularly from the attack of the malignant force attached to the "evil eye" or the "evil mouth". To protect their crops the farmers frequently use amulets such as broken pots and skulls of domestic animals (notably of donkeys), which are considered an effective means against the "evil eye" and the "evil mouth" (cf. Nicolaisen 1961, p. 133 f., 160).



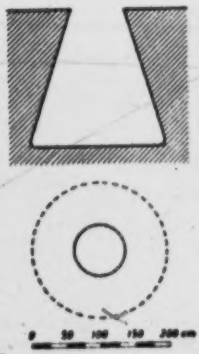


Fig. 145. Grain silos of the *tarassana* type built of stones and mud. Ahaggar, Abalessa.
Fig. 146. Cross section of a subterranean storeroom for cereals, and the like (*tfend*). Dimensions according to Foucauld: 2.00 m–2.50 m deep, 2.00 m in diameter at the bottom, 0.75 m in diameter at the surface (cf. Foucauld 1951–52, I, p. 459 f.).

[Text continues on p. 209]

Crafts

Tuareg crafts clearly disclose traits belonging to distinct cultural levels. This may be seen from a brief description of the methods of fire-making.

Matches are in ordinary use nowadays, but they are used economically not only because they cost money but also because many Tuareg live far away from towns or trading posts where matches can be obtained. The embers of a fire smoulder for a very long time, and when the Tuareg want to light a fire they normally find embers under the ashes where their fire has been. Glowing wood is carried from one tent to another on a fragment of calabashes or earthen pots, and some Tuareg even take fire with them in this way during nomadic migrations. If a new fire has to be lit and matches are not available, most Tuareg use the well-known method of fire-making by means of flint and steel. This method is widely resorted to in Northern Africa even to-day, and is practised among the Tuareg of Ahaggar as follows:— The curved piece of steel (*énefed*) is placed over the three middle fingers of the right hand. It is struck against a small piece of flint (*tafarast*) held between the first and second fingers of the left hand together with a small piece of lighting material which may be a small piece of cotton cloth. However, the best lighting material (*tajjert*) is a piece of wood of *teféryast* (*Echinops Bovei*), which has been boiled and thereupon beaten into a fibrous mass with a stone. The Tuareg keep this lighting material in a particular leather bag (*tayallaht*) together with the steel and one or two pieces of flint (Fig. 198). Lighting material according to Maire is also made from a plant named *térahit* (*Tragonum nudatum*) (Maire 1933, p. 82). The spark produced by striking the steel against the flint causes the lighting material to glow, and after blowing on it or swinging it in the air, it is placed under a small bunch of hay which burst into flame after further heavy blowing. The use of flint and steel is not a very difficult method of fire-making, and I have used it myself on journeys when matches had come to an end.

The Tuareg do not generally use more primitive methods of fire-making nowadays. But they know an ancient method of making fire by rubbing a piece of hard wood (*agar* in Ahaggar, *agar* in Ayr; *Maerua crassifolia*) against a piece of soft wood (*turha* in Ahaggar, *turza* in Ayr; *Calotropis procera*). By this process they produce by hand rubbing a glowing dust which is brought into flame by means of lighting material and hay as described above. One of my informants among the Ayr Tuareg had produced fire according to this method. Lhote states that the method is at times used by the Tuareg of Ahaggar, where the hard ribs of date palm leaves are also used for starting a fire by rubbing (Lhote 1953a, p. 258).

Stone materials play a very little part in Tuareg crafts. Natural stones are used occasionally as

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Tuareg where influence from Arab material culture is particular strong, and it is structurally identical with the Arab pack-saddle known as *hawiyya* or *hedâge*. The origin of the pack-saddle called *aruki* among the Southern Tuareg is not easily determined. It may perhaps constitute a late type which developed from a pack-saddle with two curved or angular trees in front of the camel's hump. This may be true of some *aruki*-like saddles. But certain pack-saddles of *aruki* type may perhaps have originated from a kind of split wood similar to that used for camels by the Somali of Tana River (cf. Ahlefeldt 1948, ill. p. 137).

There are other traits of camel breeding that have apparently been introduced among the Tuareg through contact with the Arabs. This may be true of the looped rope (*asayun*) connected with a little stick for attachment around the camel's foreleg (p. 72 ff., Fig. 45a). This device is unknown among the Ayr Tuareg though common among the Northern Tuareg who often make it of camel's wool. It seems to be known among most, perhaps all, Arabs, who manufacture it from the same material. Among the Ababde and the Bisharin it is plaited from dum palm material (cf. Sleesen-Dolk 1957, p. 12, Figs. 28–30). It is most probably an Arab trait which also seems to be Cauvet's opinion (Cauvet 1925–26, I, p. 554 & pl. LXII, p. 555).

We may perhaps also mention the large woven transportation bags which are extremely common among all North African Arab pastoralists, while unknown among the Tuareg. But small plaited or woven bags of goat hair mixed with camel's wool are manufactured in Ahaggar by women of certain tribes (p. 266 f, Fig. 209a–b) .These bags are known as *tirrar* (sing. *téreriri*) which seems to be derived from Arabic (cf. Foucauld 1951–52, IV, p. 1776 & Cauvet 1925–26, I, p. 711). The small loading sticks *tihdad* (sing. *téhediî*) (p. 76) used to unite the two halves of a camel load are perhaps also Arab in origin for this particular word is apparently also derived from Arabic (cf. Foucauld 1951–52, II, p. 520 & Cauvet 1925–26, I, p. 711).

The origin of other traits of camel-breeding is not so easy to determine, but it is very possible that the plaited pouch which among the Northern Tuareg constitutes the normal method to prevent camel calves from sucking (p. 62, Figs. 41–42) was also introduced by the Arabs. This device is unknown among the Ayr Tuareg and apparently also among the *Kel Geres*. It is found among the *Iwllemmeden Kel Ataram* (*abegu*) and is recorded in literature from the *Kel Dennek* (Nicolas 1950a, p. 141), and from the Moors (cf. Monteil 1952, p. 71). It is widely found among all pastoral Arabs of Northern Africa and of the Arabian Peninsula.

As to the use of camel brands produced by burning with a redhot iron it seems difficult to judge from distributions the origin of this method. These brands are known among most Tuareg with the exception of the *Kel Ferwan* and other Tuareg of Ayr, who use earmarks cut with a knife. Earmarks seem to be used for camels also among the Moors (cf. Monteil 1952, p. 103) and were apparently used in ancient Arabia (cf. Cauvet 1925–26, I, p. 298). One might perhaps assume that earmarks constitute an older type of proprietry marks, while brands came later. But information about marks and brands is scarce.

The origin of many traits of camel-breeding cannot be determined, but it is not be doubted that the Arabs have introduced into North Africa a particular breed of camel together with certain saddles and objects connected with the use of the camel as a pack animal. There is also no doubt that these